

Lloyd Shoals Hydroelectric Project FERC Project Number 2336-094

Volume 2

Public

Exhibit C, con't Exhibit D Exhibit H

Prepared by

Southern Company Generation Hydro Services

December 2021



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Exhibit C

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Figure 79. Construction Progress as of 10/3/1909

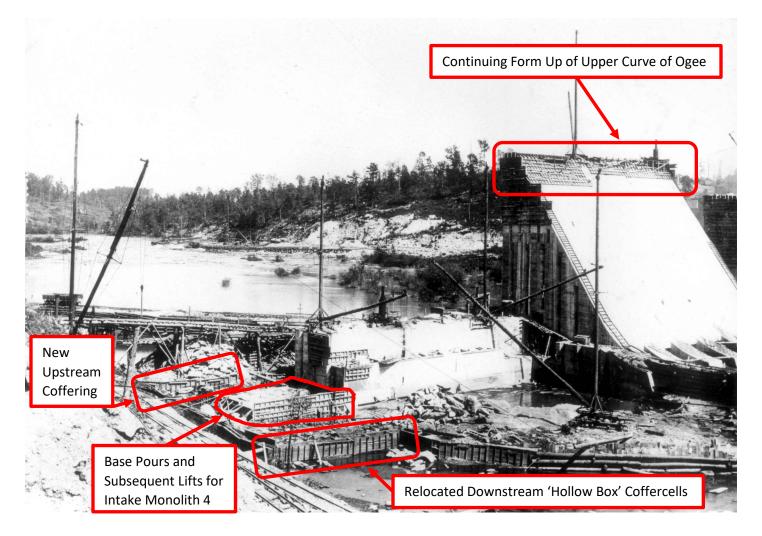


Figure 80. Intake/Powerhouse Construction Progress as of 10/9/1909



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Figure 81. West Abutment Excavation



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Figure 82. Spillway Monoliths as of 10/9/1909

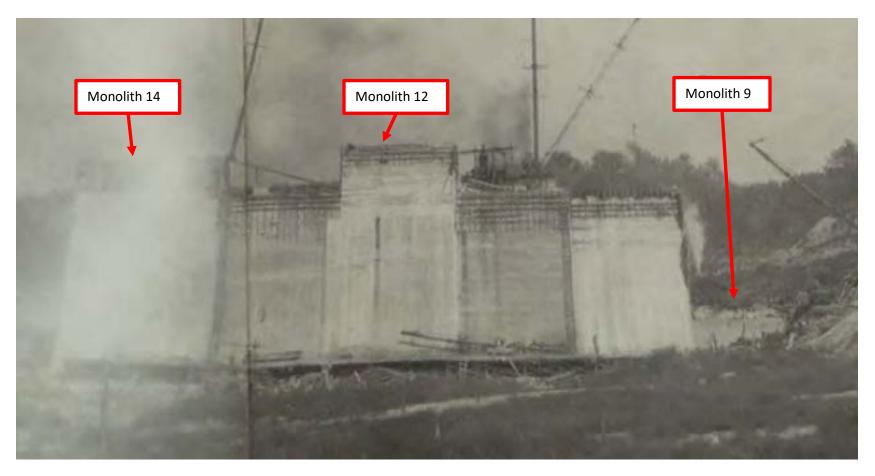


Figure 83. Intake/Powerhouse Area as of 10/31/1909

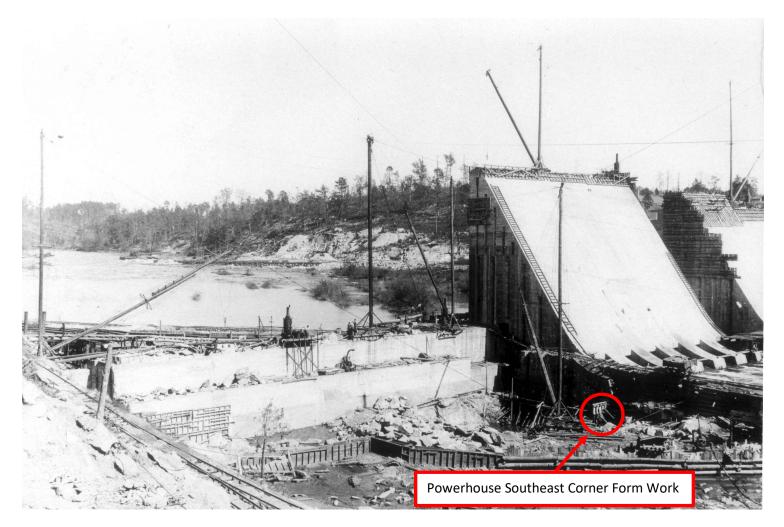


Figure 84. Spillway Monoliths as of 10/31/1909

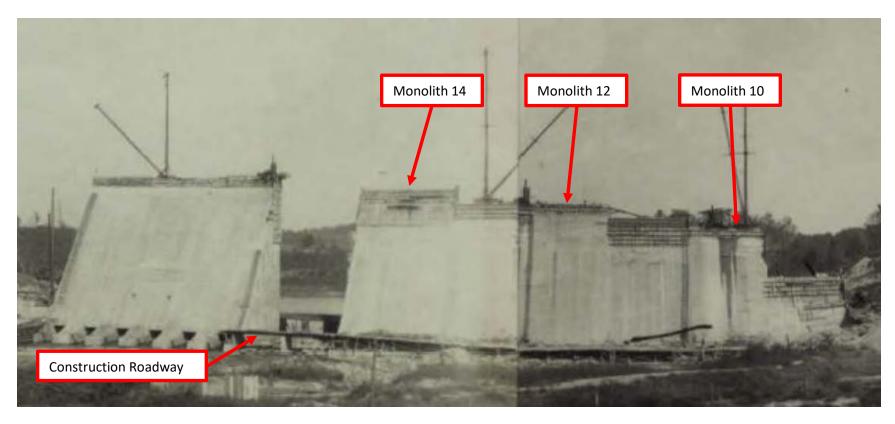


Figure 85. Unit 1 Draft Tube Foundation Area and Walls



Figure 86. Unit 2 Draft Tube Area Rock Drilling

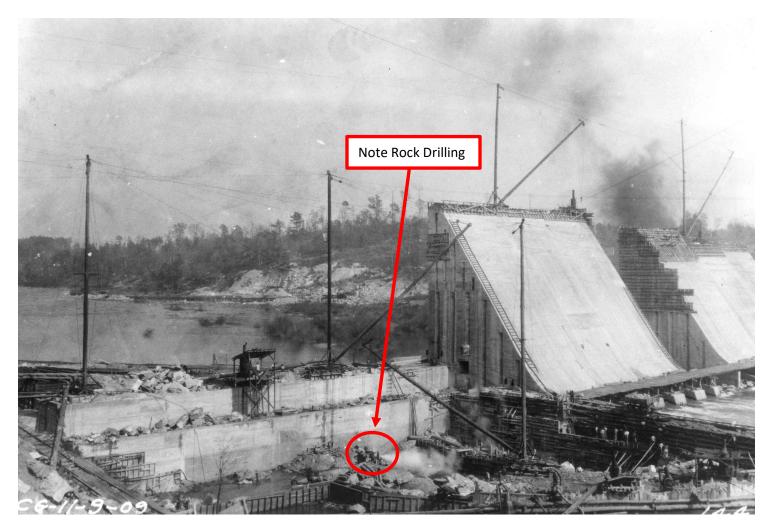


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Figure 87. Spillway Monoliths as of 11/9/1909

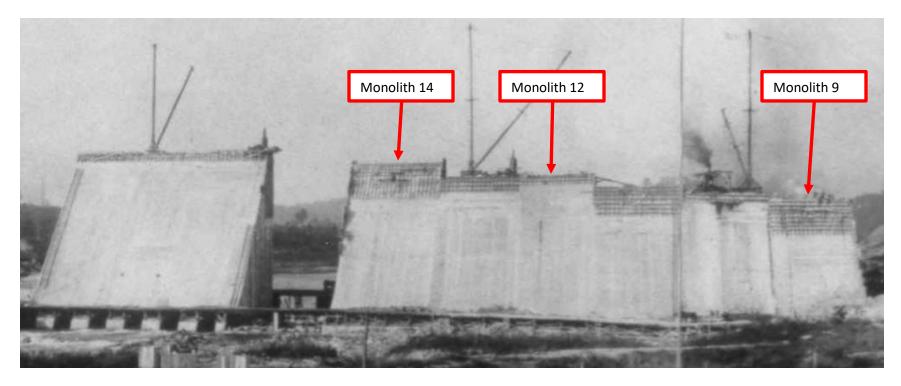


Figure 88. Typical Draft Tube Area

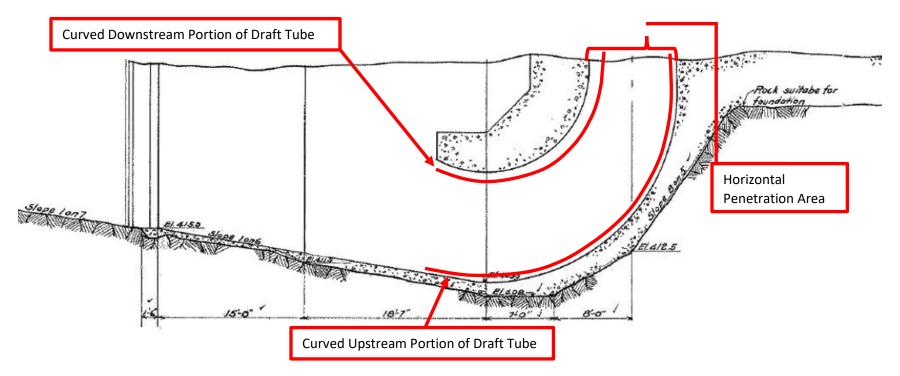


Figure 89. Unit 1 and Unit 2 Draft Tube Areas

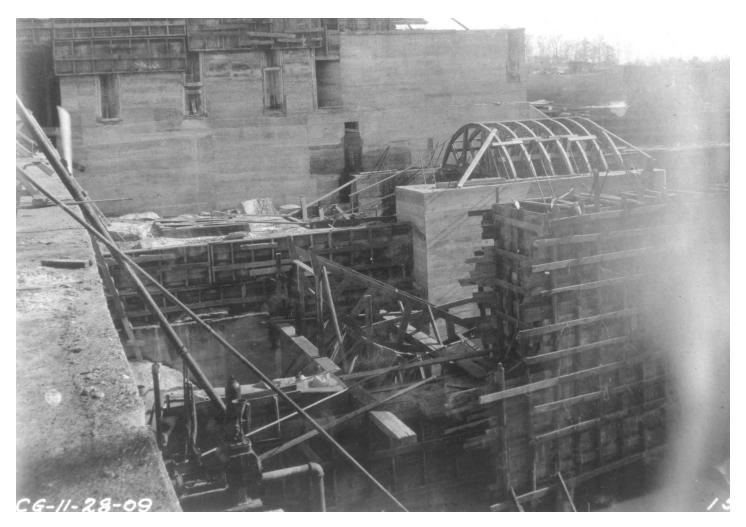


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Figure 90. East Earth Embankment Core Wall Area on 11/28/1909

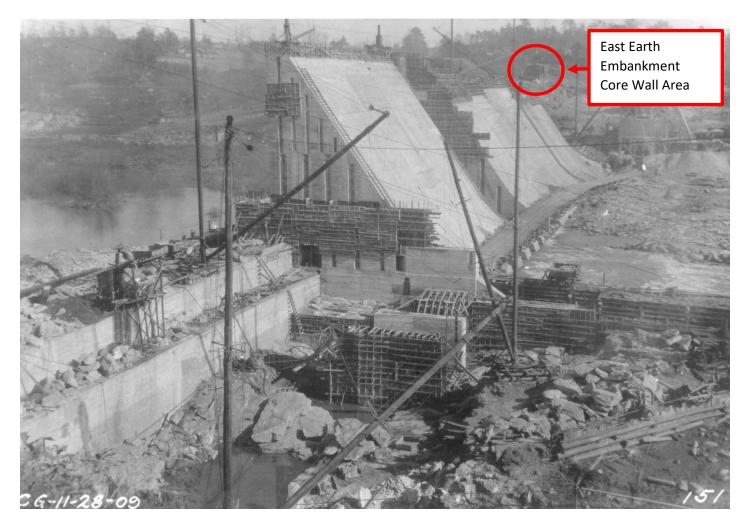


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Figure 91. Small-Batch Concrete Operation

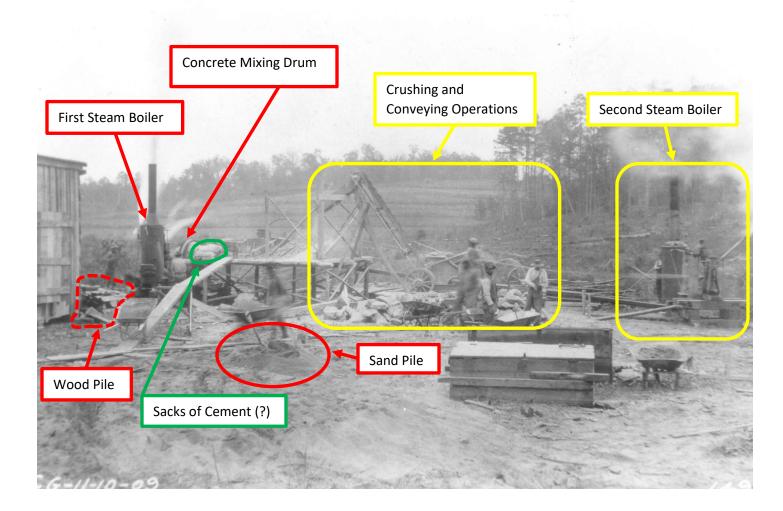


Figure 92. Draft Tube Area as of 12/9/1909

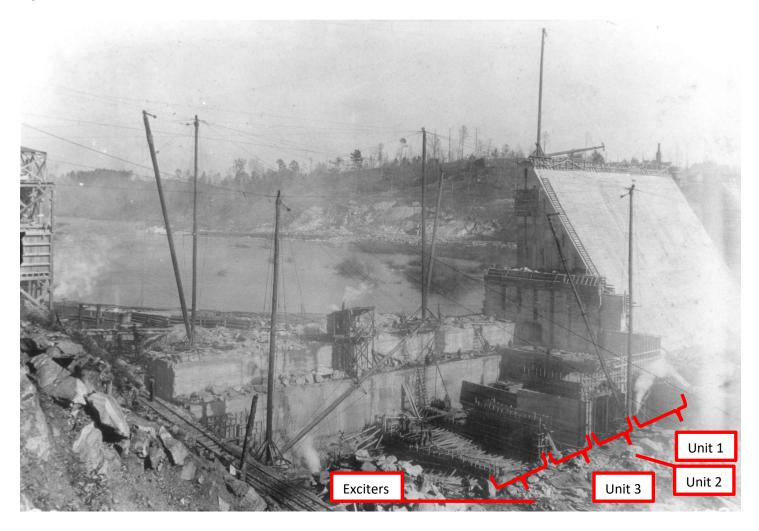


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Figure 93. Unit 1 and 2 Turbine Metal Components

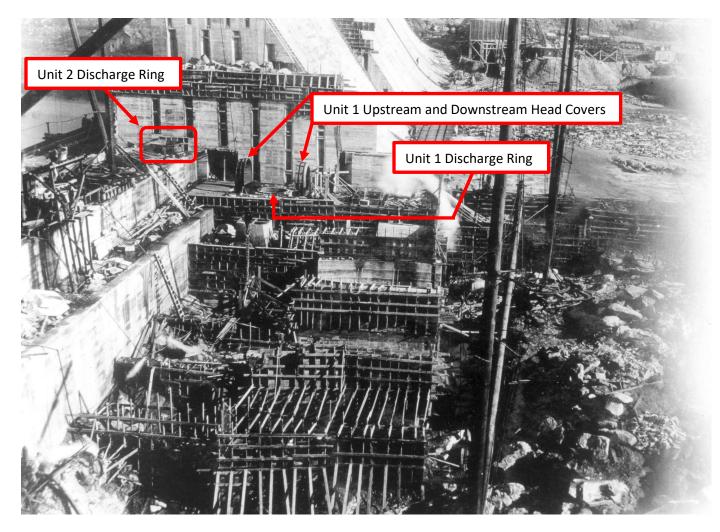


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Figure 94. Partial Powerhouse Elevation

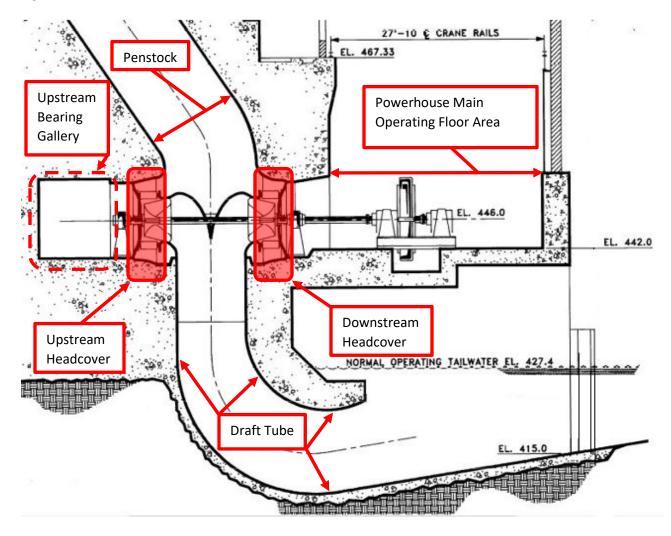


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Figure 95. Unit 1 Construction Progress as of 12/21/1909

Upstream Bearing Gallery	No.		Forms for Downstream Headcover Area		
		53913 4			
	EA	Unit 1 Discharge Ring	E an	ALX I	
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Figure 96. Unit 2 Through 3 as of 12/21/1909

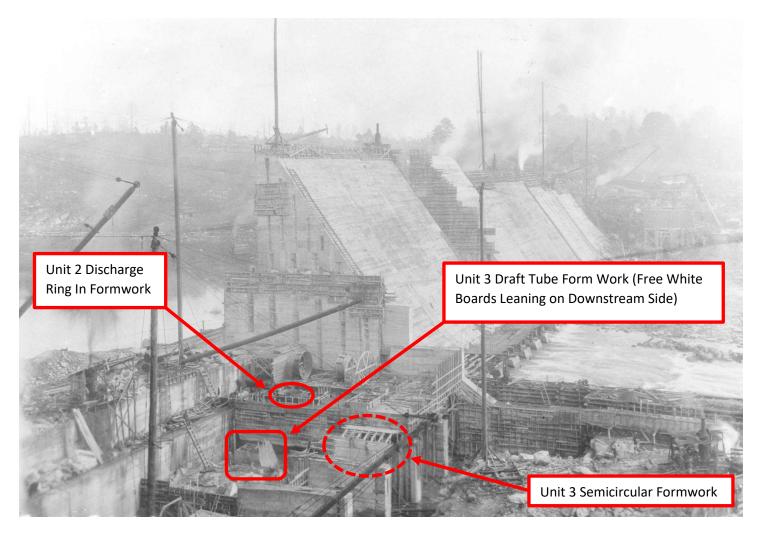


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Figure 97. Exciter Discharge Area and Unit 4 Area as of 12/21/1909

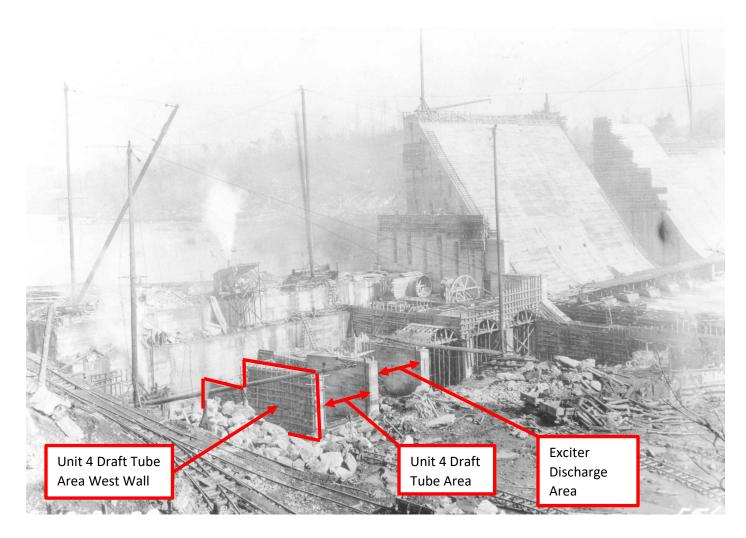


Figure 98. Partial Demolition of Construction Roadway

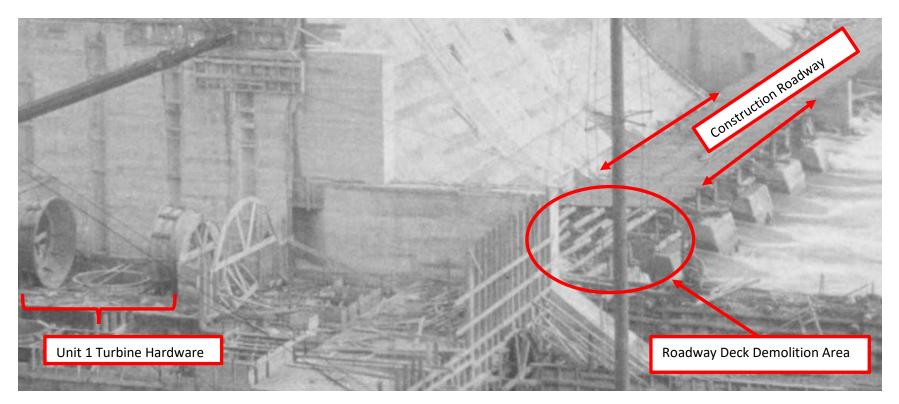


Figure 99. Spillway Monolith Construction as of 12/31/1909

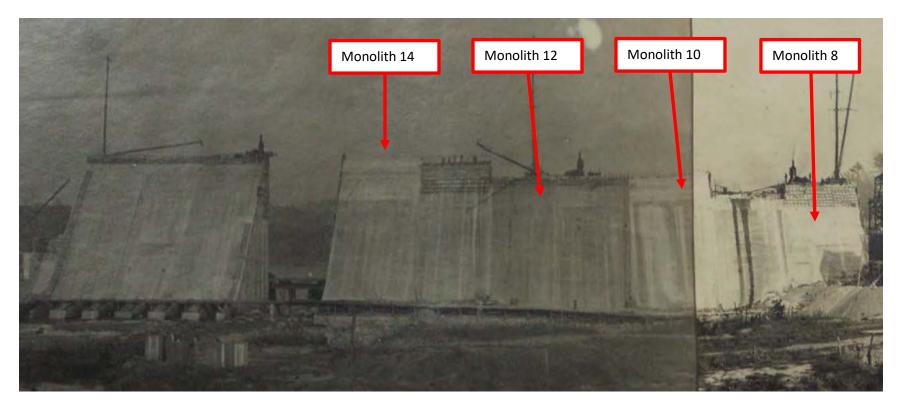


Figure 100. East Earth Embankment Core Wall as of 12/31/1909



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Figure 101. Powerhouse Construction as of 1/2/1910

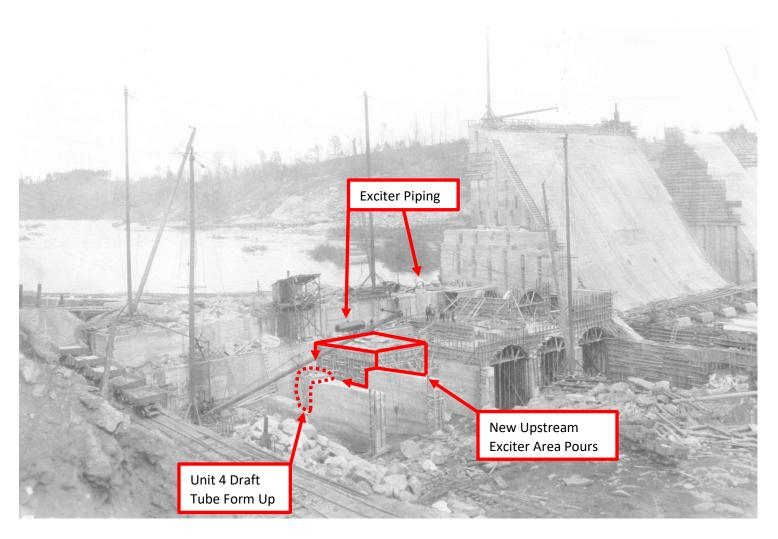


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Figure 102. Transmission Line Tower

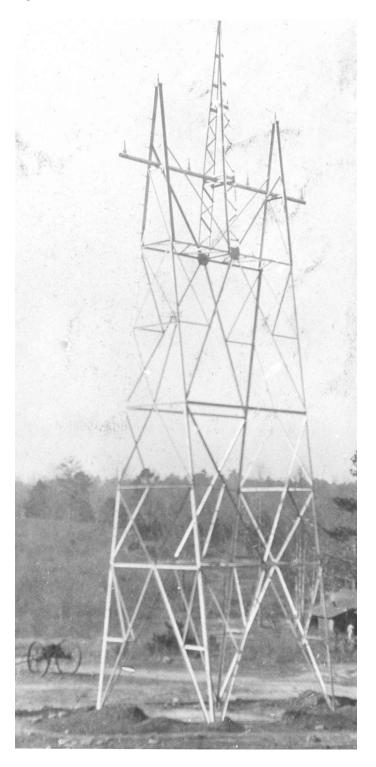


Figure 103. Transmission Line Tower Erection



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Figure 104. Powerhouse Construction Progress as of 1/11/1910

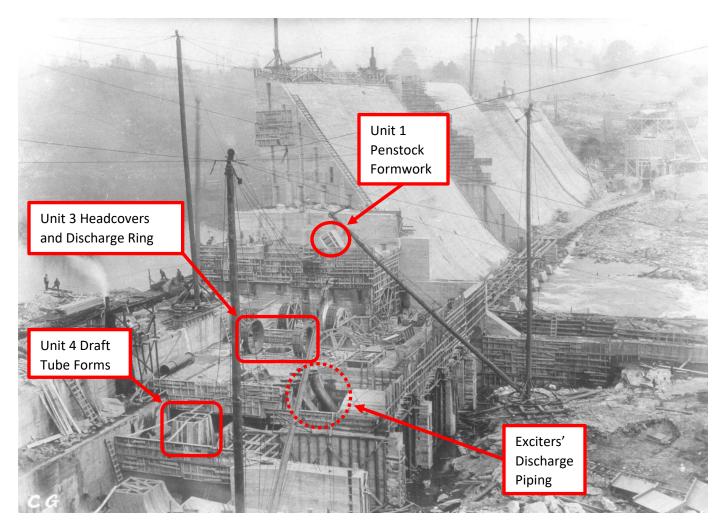


Figure 105. Spillway Monoliths' Construction Progress as of 1/11/1910

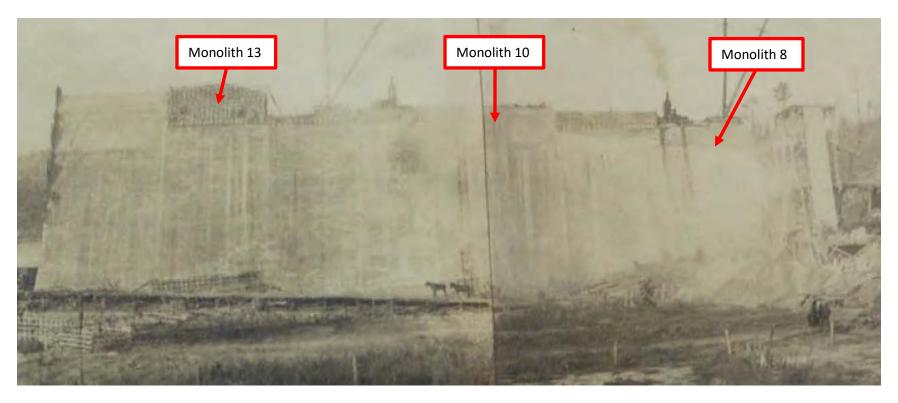


Figure 106. Powerhouse Construction Area Flooding

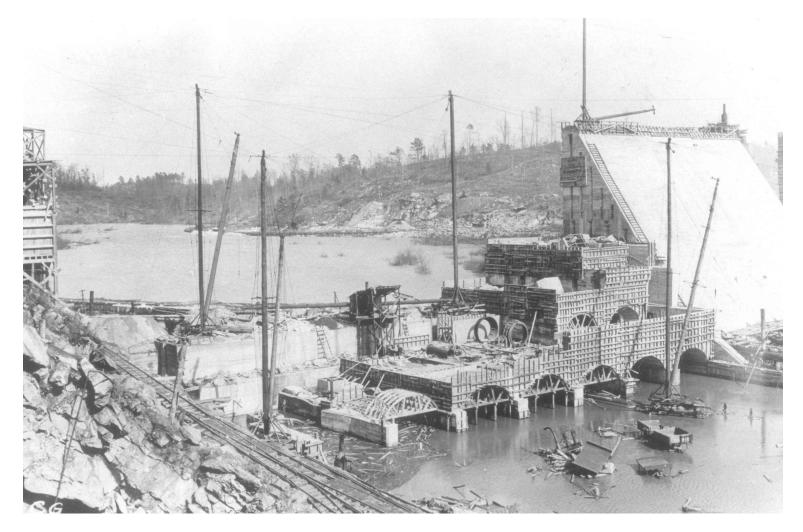


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Figure 107. Powerhouse Construction Progress as of 1/30/1910

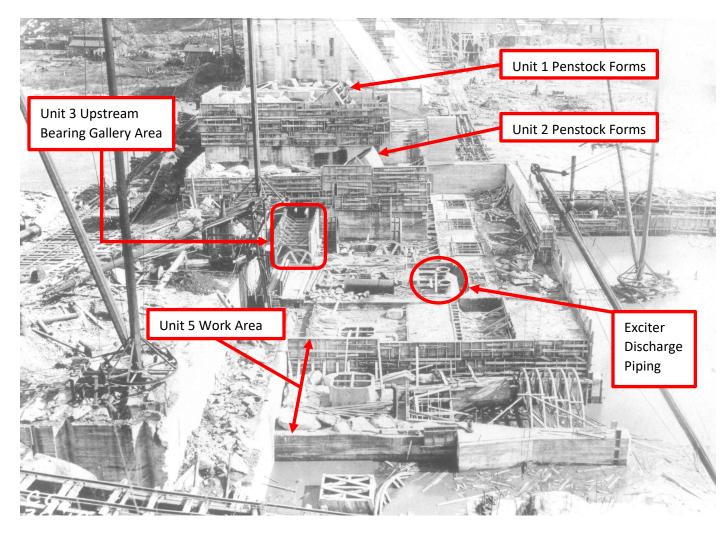


Figure 108. East Earth Embankment Core Wall as of 1/30/1910



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Figure 109. Powerhouse Construction Progress as of 2/6/1910

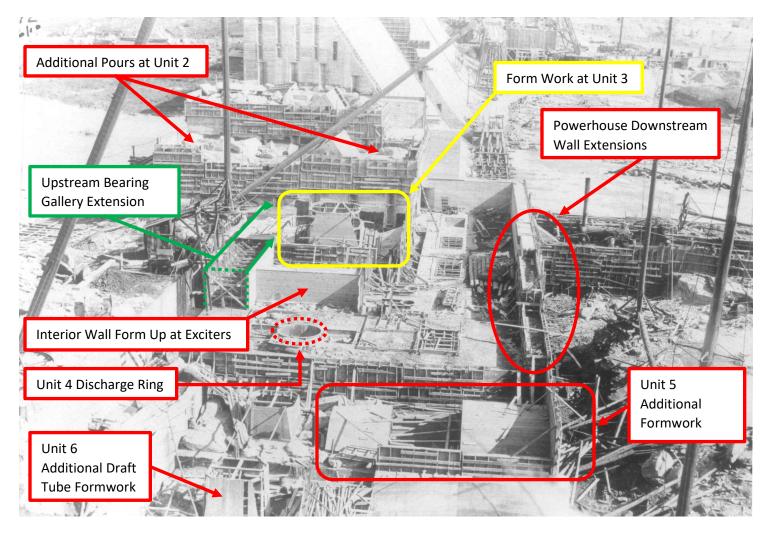


Figure 110. Powerhouse Construction Area Flooding on 3/3/1910

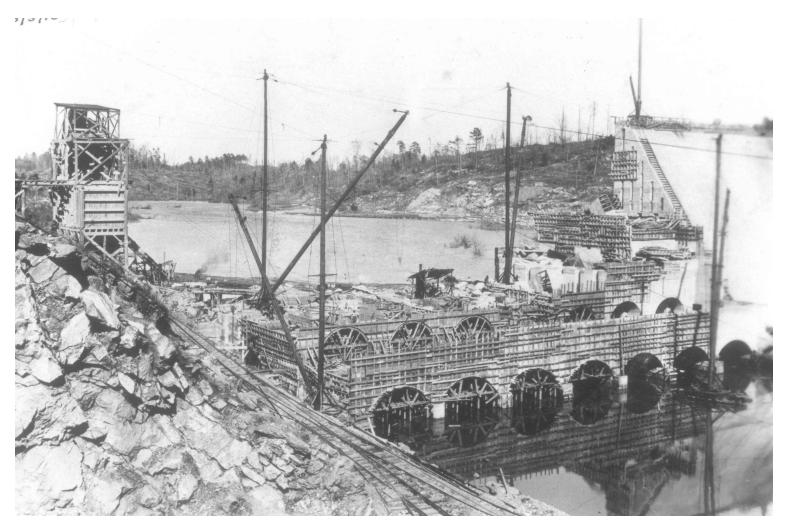


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Figure 111. Powerhouse Area Construction as of 3/3/1910

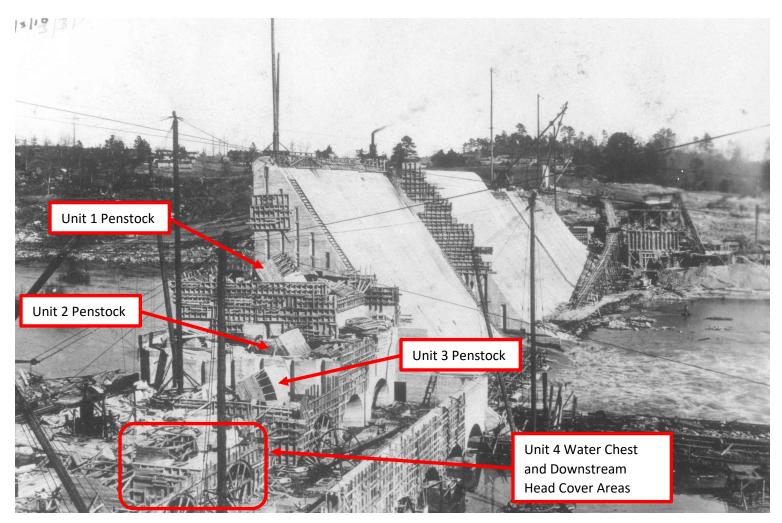


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Figure 112. Spillway Monoliths 8 Through 14 as of 3/3/1910

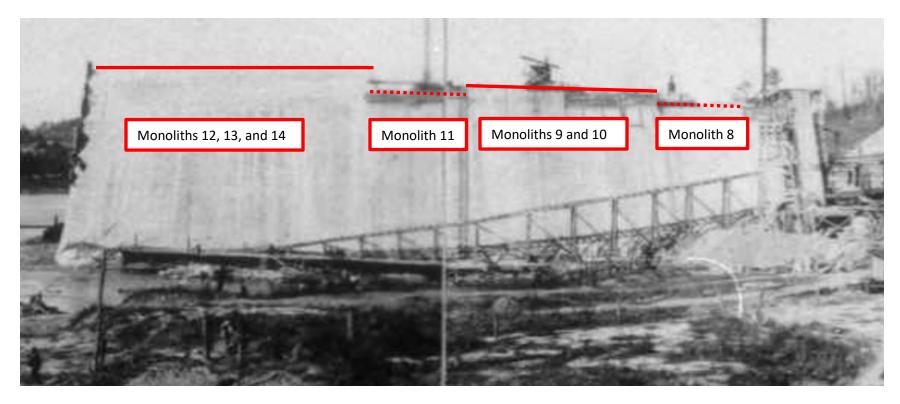


Figure 113. Upstream Original Construction Bridge Demolition



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Figure 114. Spillway Monolith 6

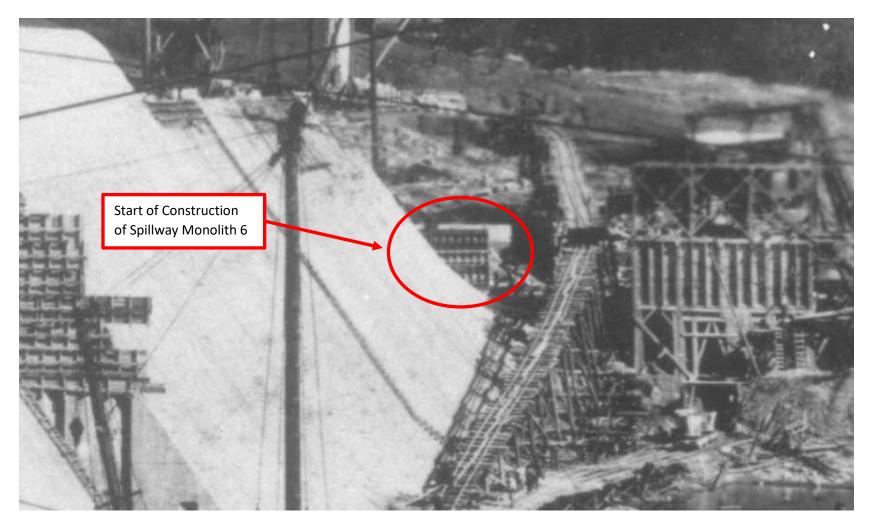


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Figure 115. East Abutment Foundation Excavation

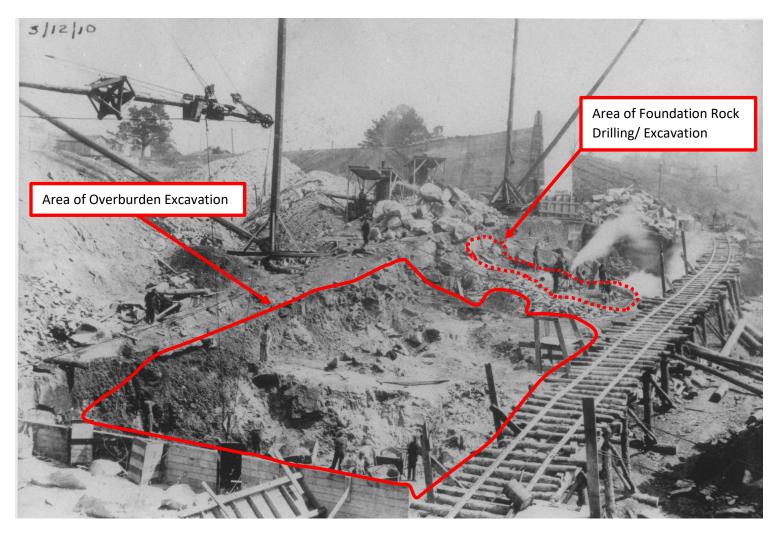


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Figure 116. First Structural Steel Members

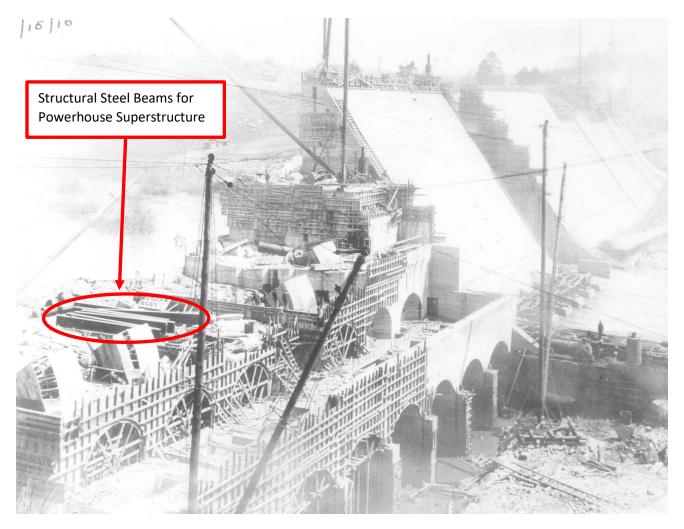


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Figure 117. Powerhouse Construction Progress as of 3/20/1910

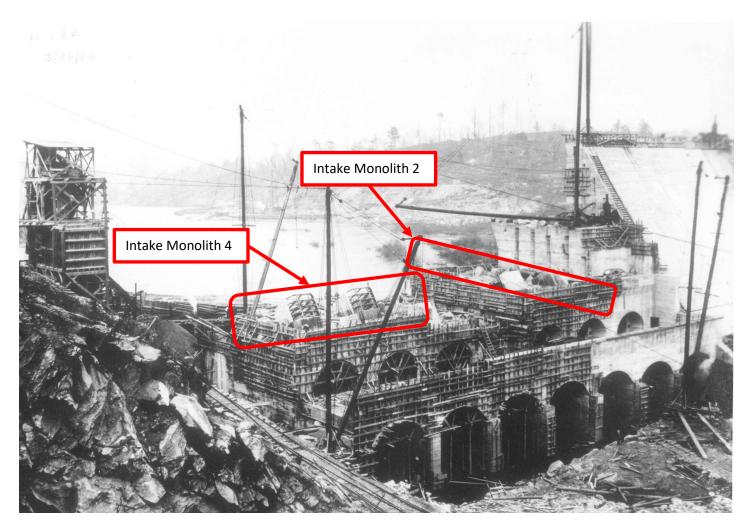


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Figure 118. Water Driven Exciter Turbine Casing

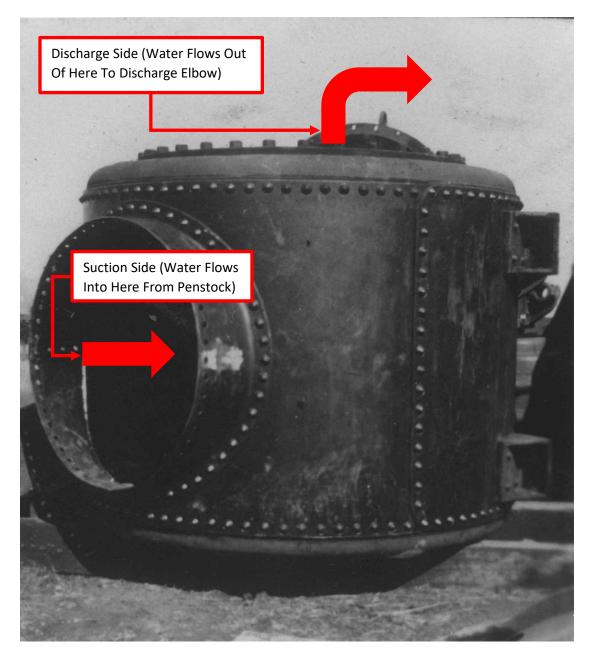


Figure 119. Powerhouse Construction Progress as of 3/27/1910

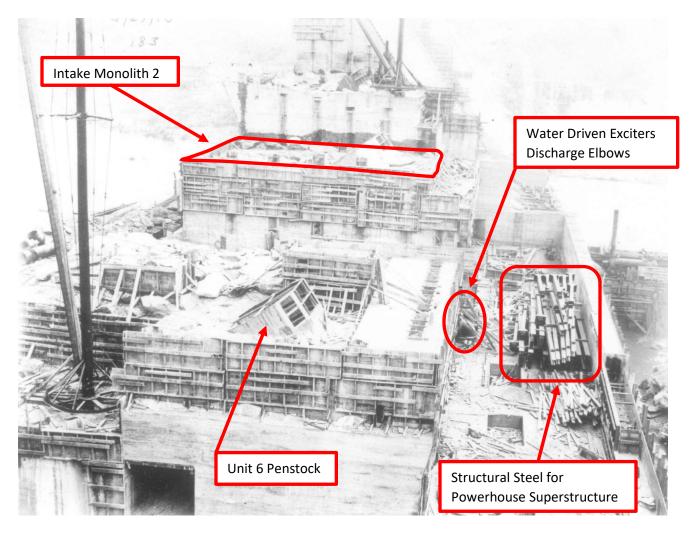


Figure 120. Foundation Excavation

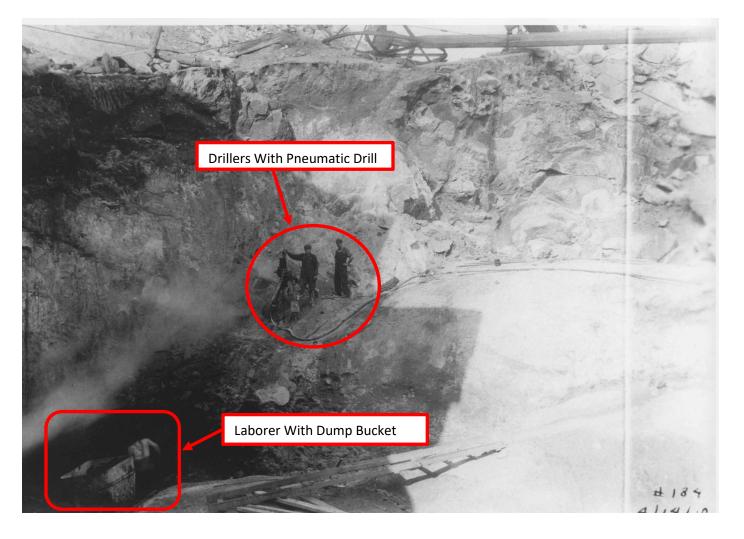


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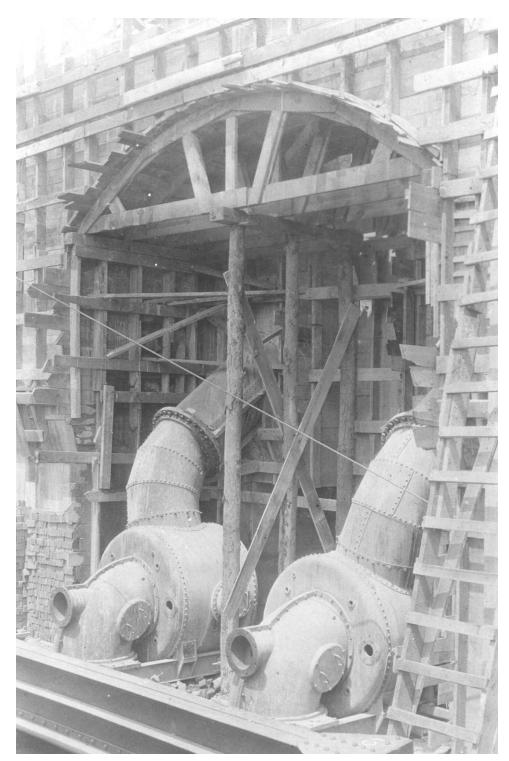


Figure 121. Water Driven Exciters, Partial Erection and Form Up of Water Supply Piping

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Figure 122. Powerhouse Construction Progress as of 4/14/1910

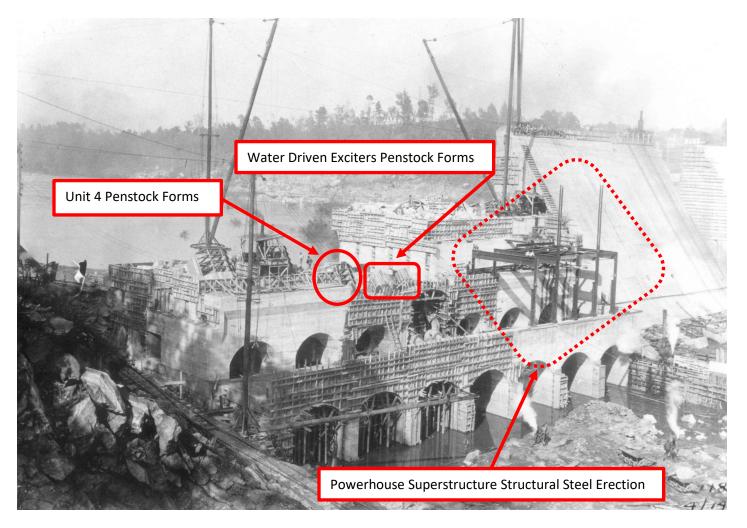


Figure 123. Powerhouse Construction Progress as of 4/17/1910

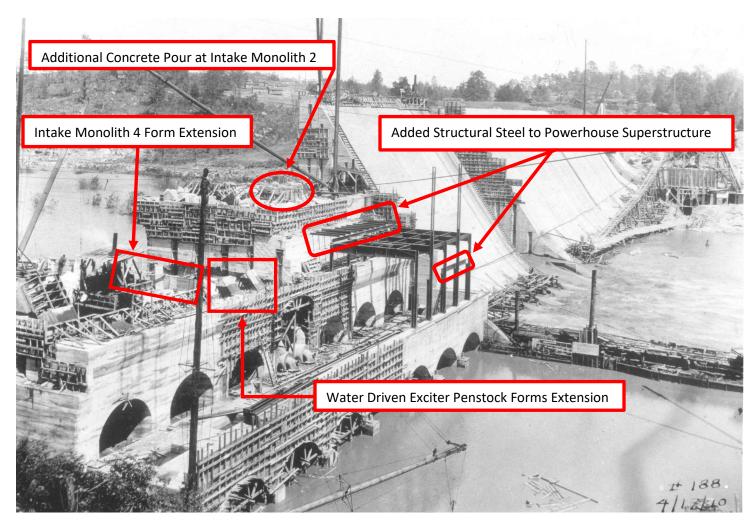


Figure 124. Spillway Monoliths Construction Progress as of 4/17/1910

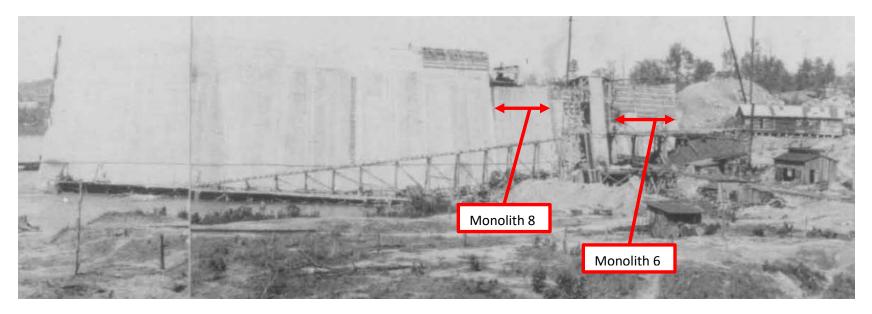


Figure 125. Powerhouse Construction Progress as of 5/1/1910

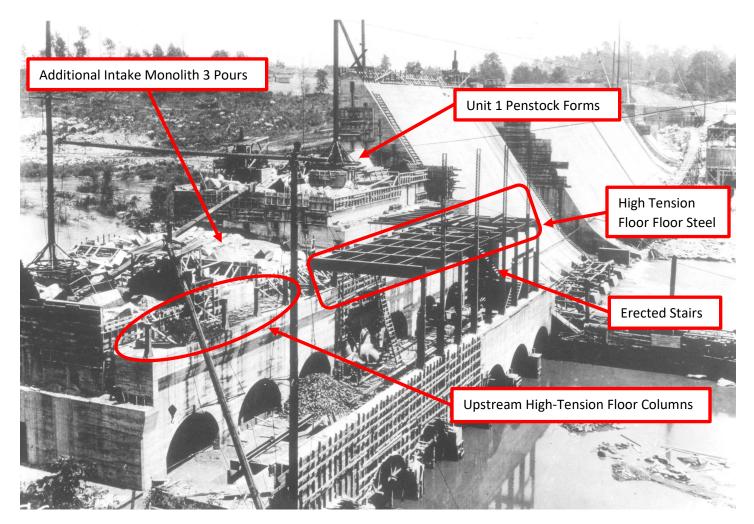


Figure 126. Spillway Monoliths Construction Progress as of 5/1/1910

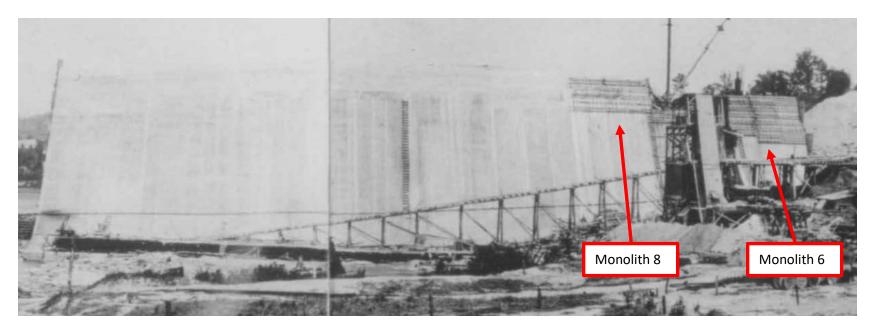


Figure 127. East Earth Embankment Core Wall Area Construction as of 5/1/1910,

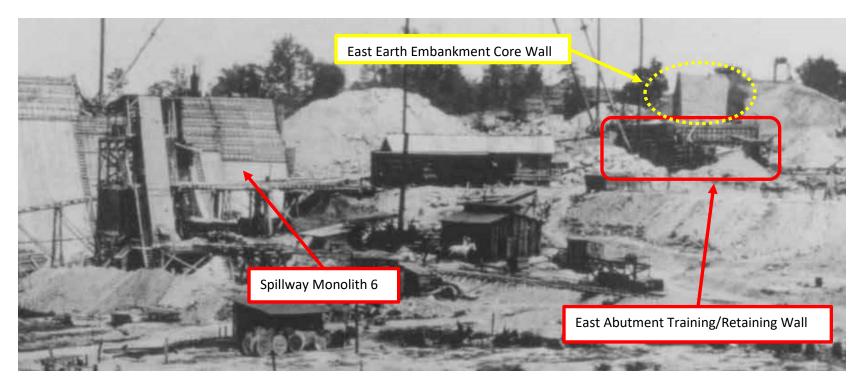


Figure 128. Powerhouse Construction Progress as of 5/8/1910

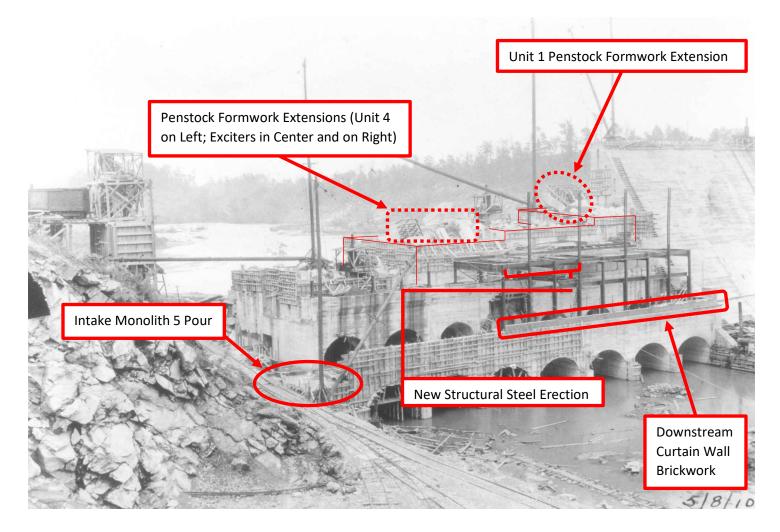


Figure 129. Intake Monolith 5 Area Construction as of 5/15/1910

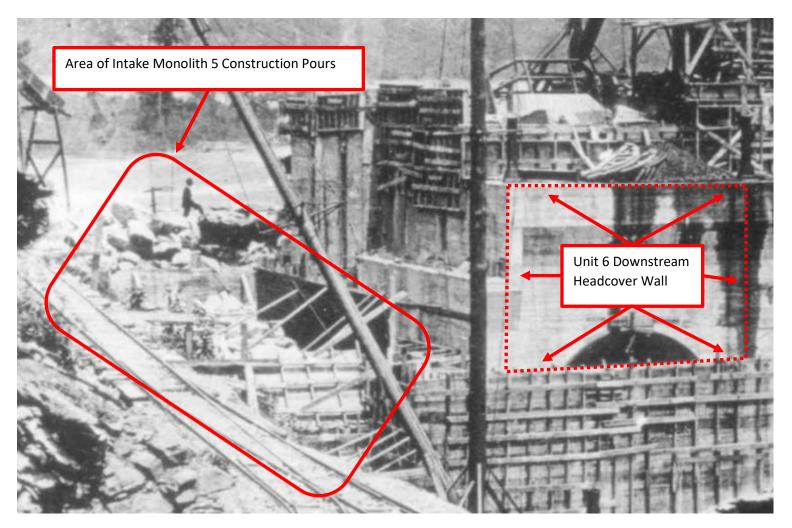


Figure 130. Spillway Area Construction as of 5/15/1910

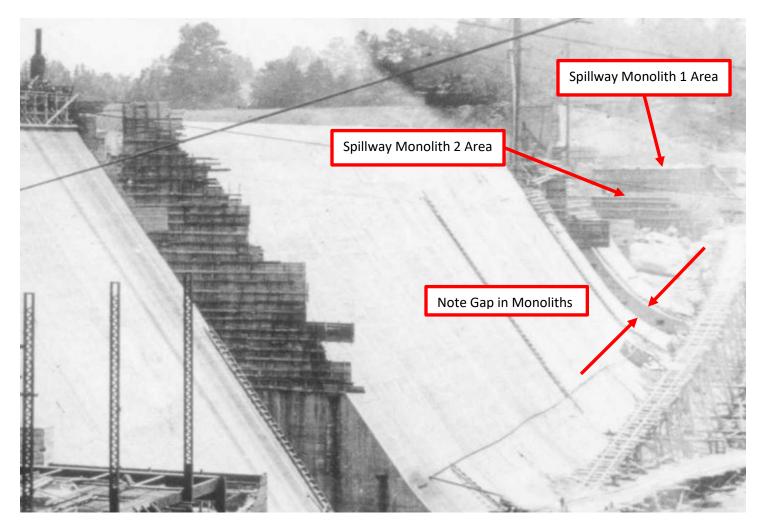


Figure 131. Bonnetts Bridge



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Figure 132. Powerhouse Construction Progress as of 5/23/1910

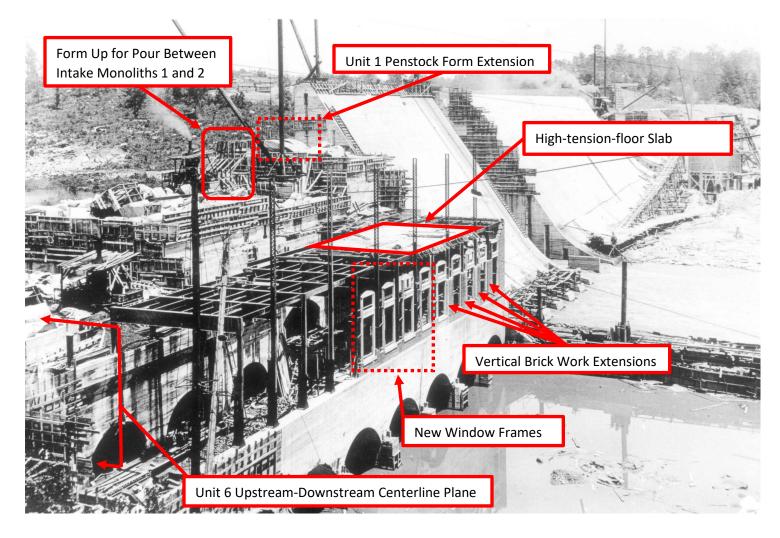


Figure 133. Spillway Area Construction Progress as of 5/23/1910

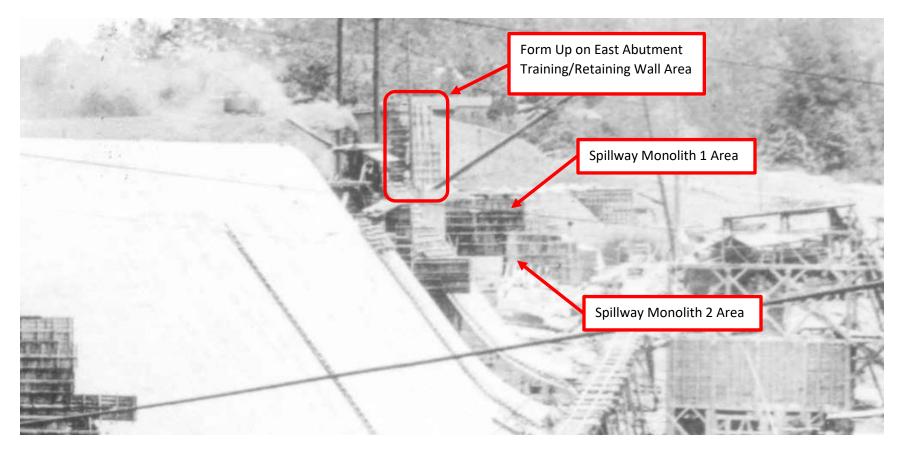


Figure 134. Union School Branch Bridge



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Figure 135. West Nonoverflow Construction Progress as of 6/16/1910

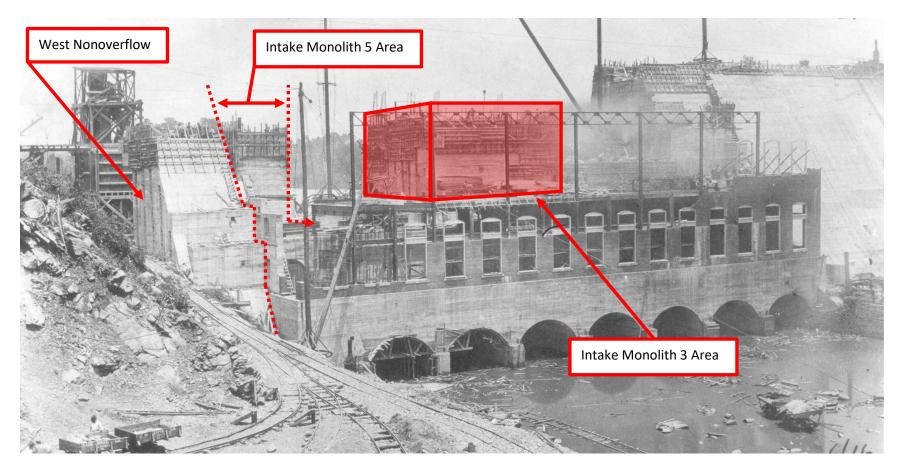


Figure 136. Powerhouse Construction Progress as of 6/16/1910

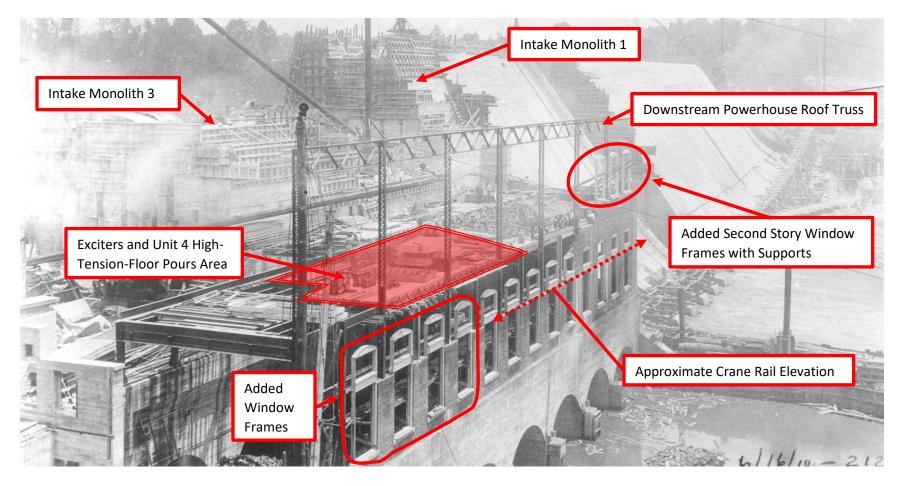


Figure 137. Arbitrary Window Frame Designations

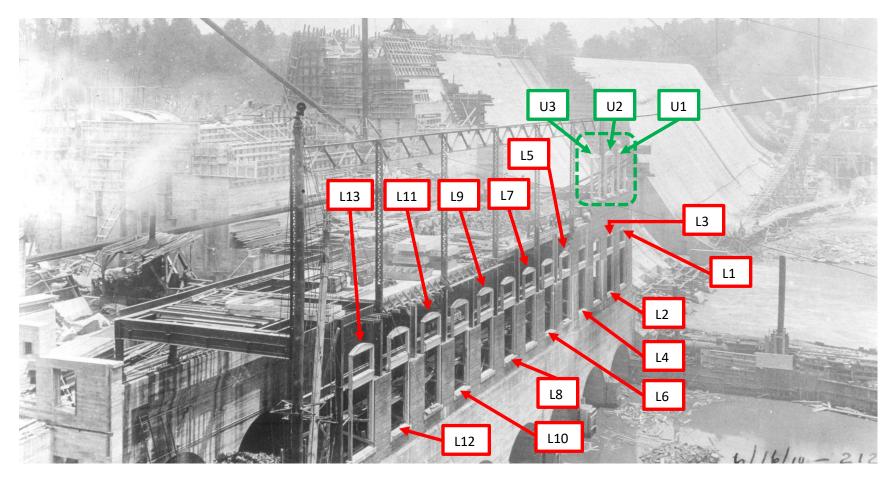


Figure 138. Powerhouse Construction Progress as of 6/28/1910

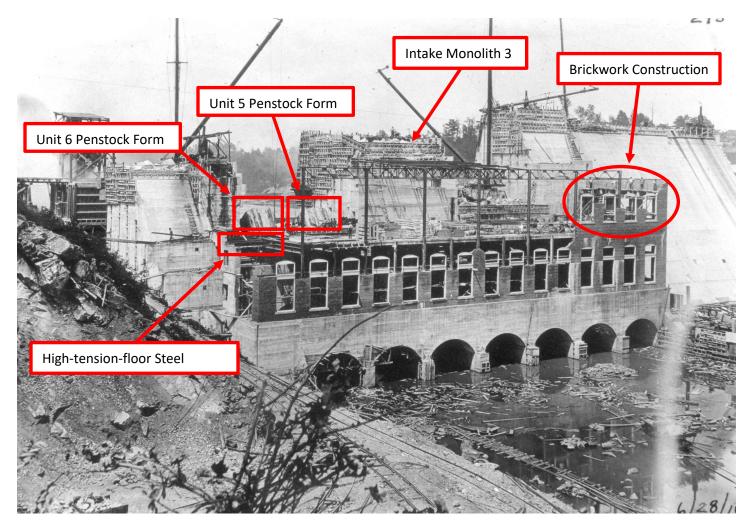


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Figure 139. Spillway Area Construction Progress as of 6/28/1910

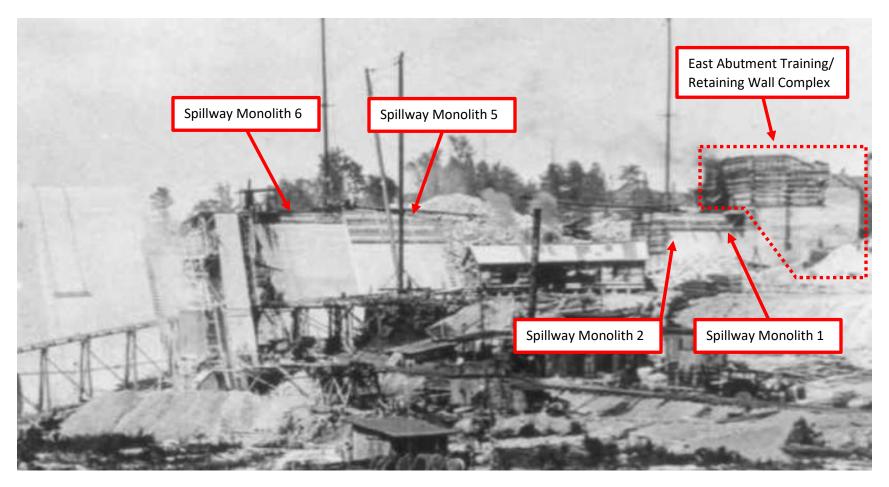


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Figure 140. Powerhouse Construction Progress as of 7/6/1910

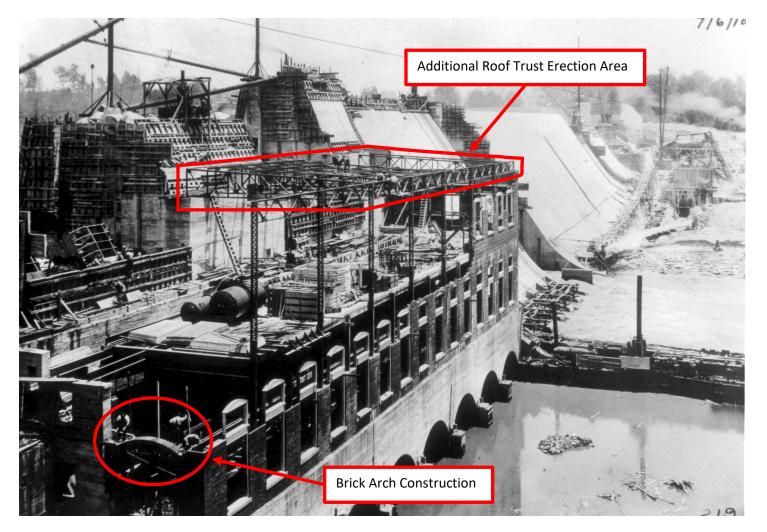


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Figure 141. Intake and West Nonoverflow Monolith Construction Progress as of 7/25/1910

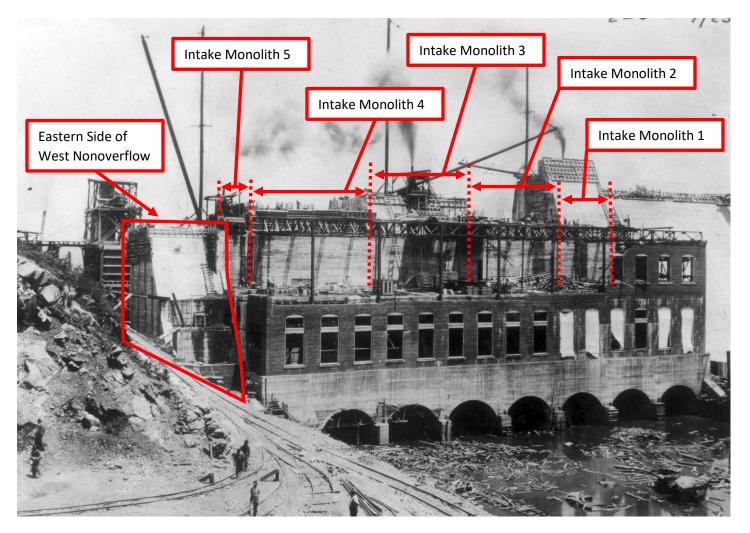


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Figure 142. High-Tension-Floor Area and Roofing

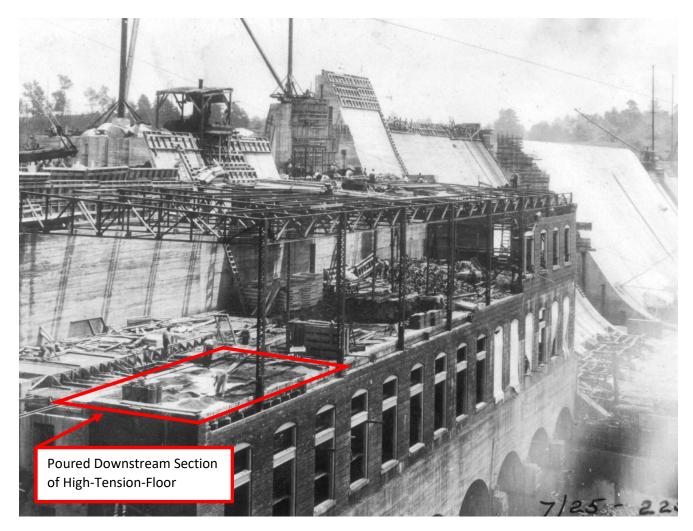


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Figure 143. Powerhouse Construction Progress as of 8/8/1910

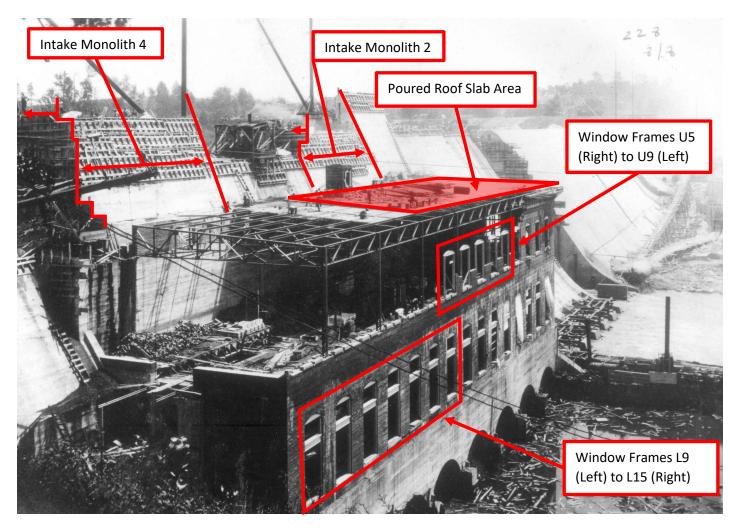


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Figure 144. Details of Powerhouse Roof Construction

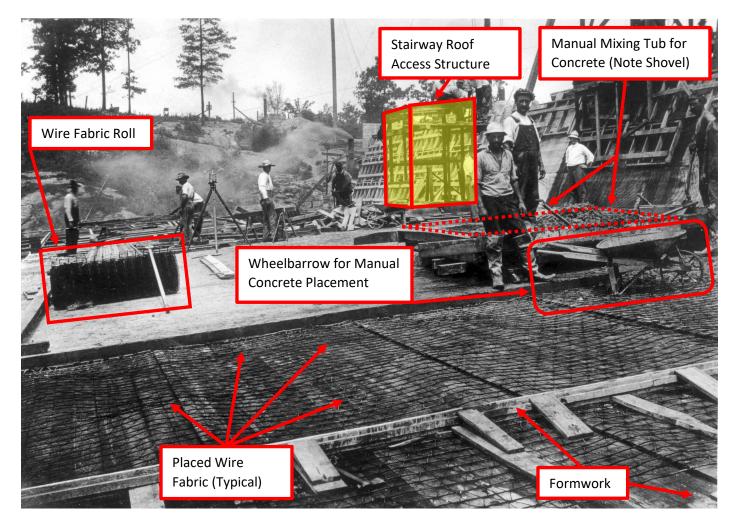


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Figure 145. Spillway Area Construction Progress as of 8/8/1910

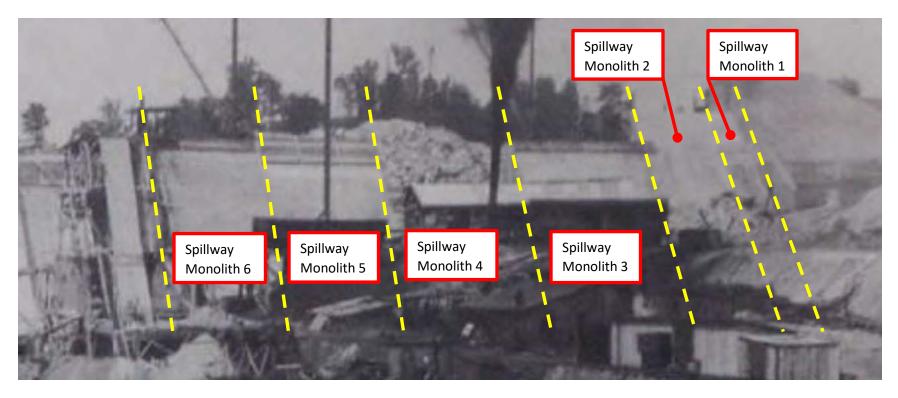


Figure 146. Upstream View of Intake Structure as of 8/15/1910

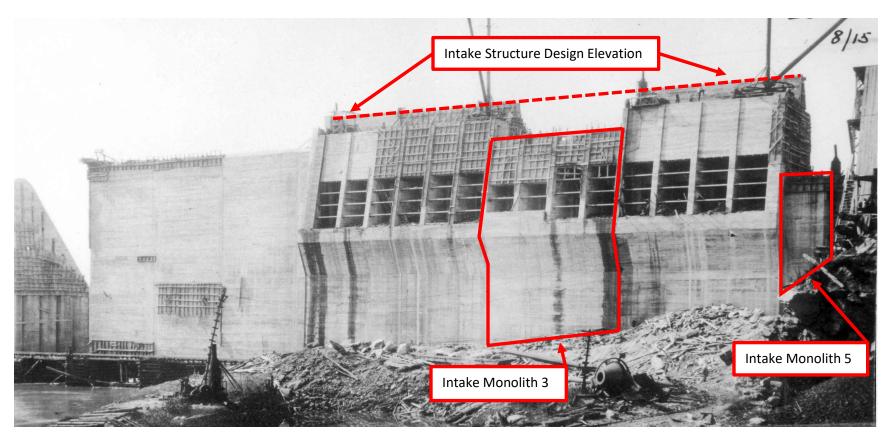


Figure 147. East Embankment Upstream Slope Rip Rapping



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Figure 148. Operators' Platform as of 8/19/1910

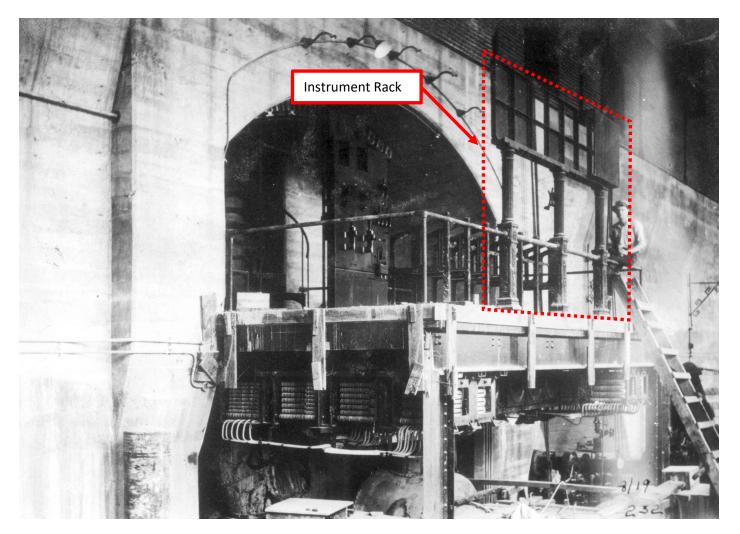


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Figure 149. Powerhouse Construction as of 8/29/1910

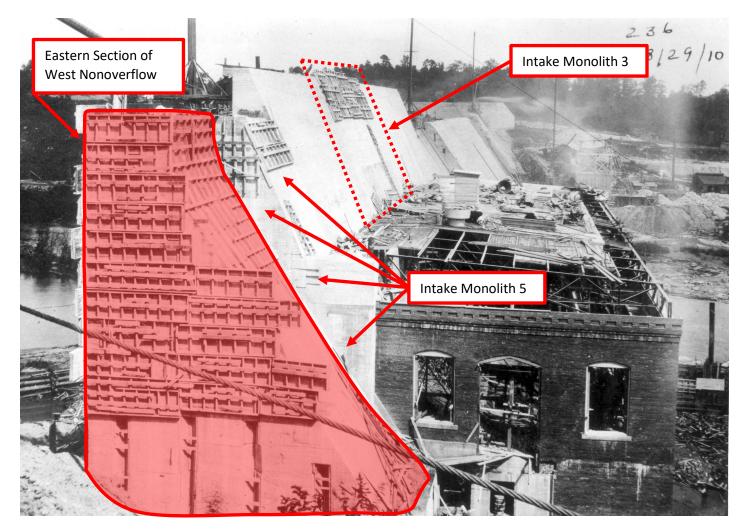


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Figure 150. East Embankment Rip Rapping as of 8/29/1910

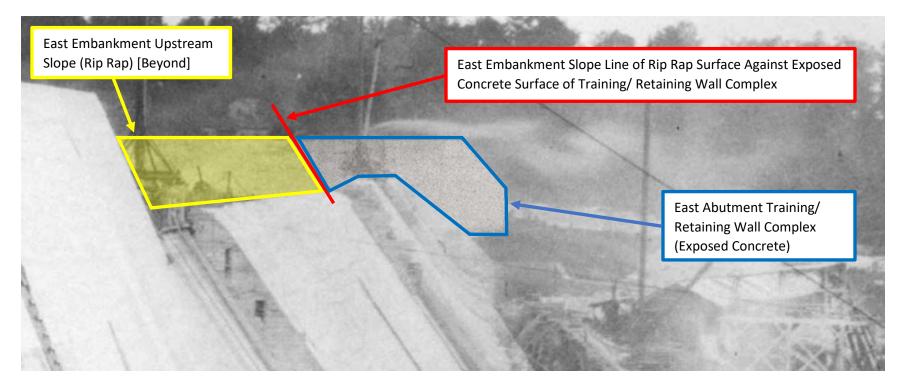


Figure 151. Powerhouse Generator Erection



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Figure 152. Spillway and East Earth Embankment Construction as of 9/4/1910

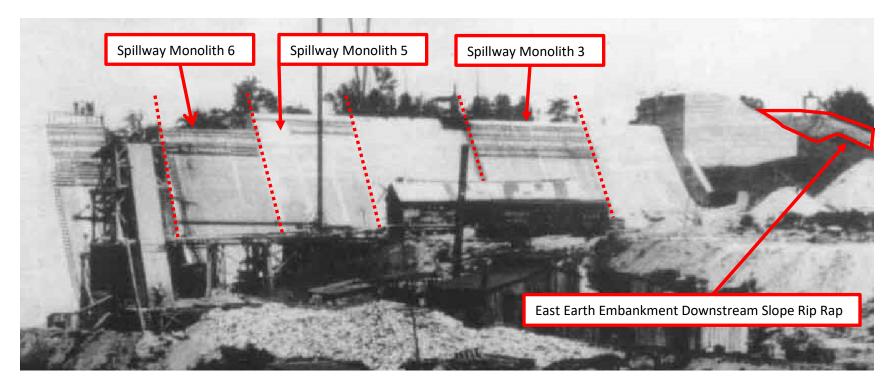


Figure 153. Powerhouse Construction as of 9/4/1910

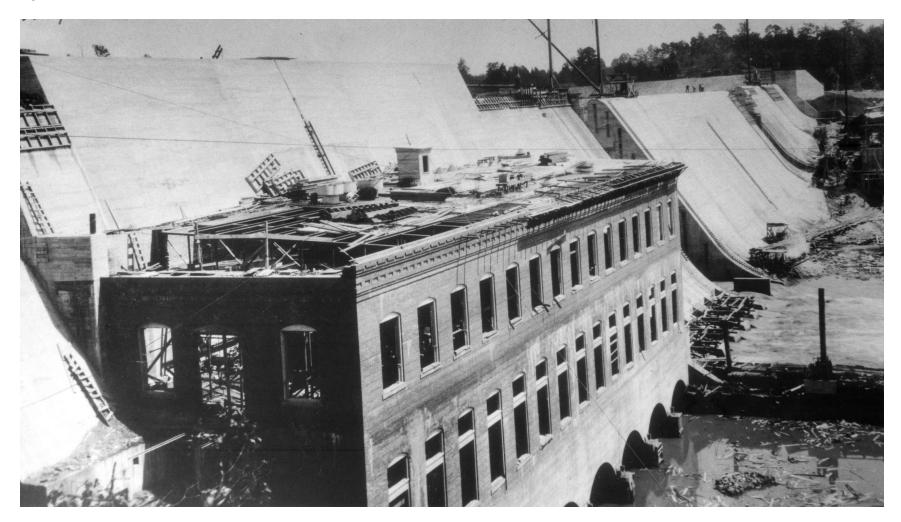


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Figure 154. Powerhouse and Spillway Monolith 15 as of 9/10/1910

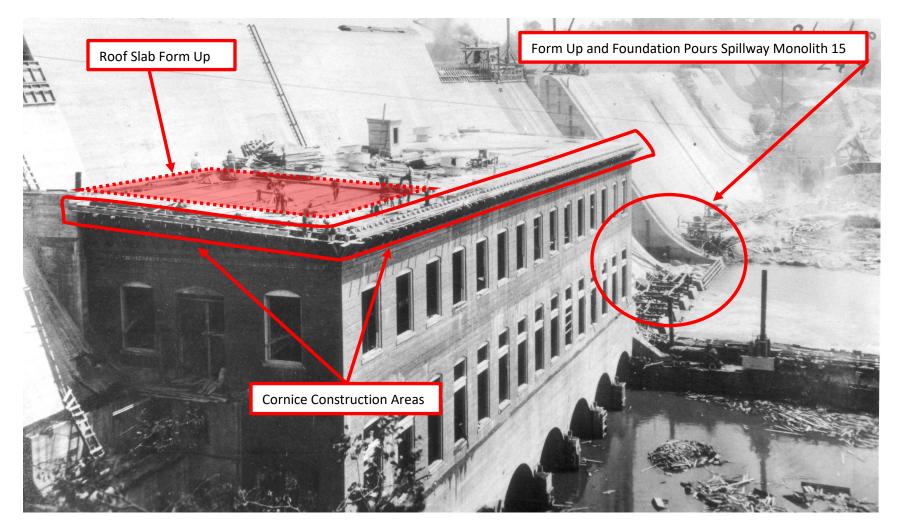


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Figure 155. West Nonoverflow Monoliths

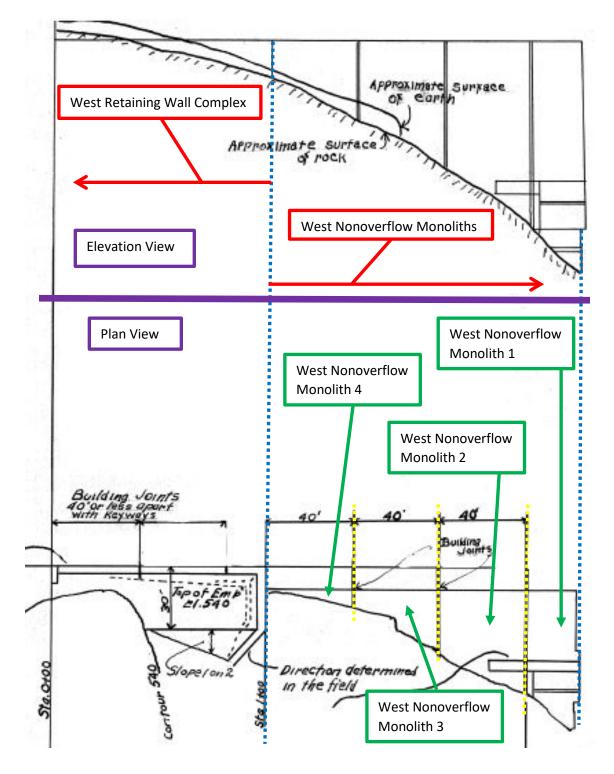


Figure 156. Substation Building Cross Section

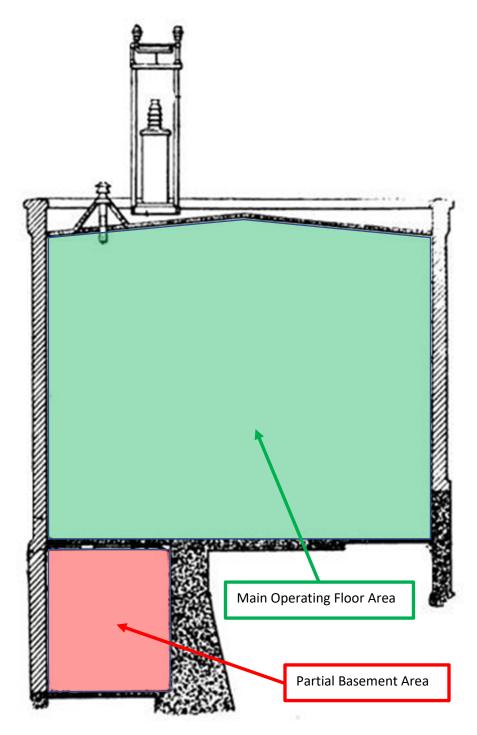


Figure 157. Substation Transformer Installation



Figure 158. Powerhouse and West Nonoverflow Construction Progress as of 9/26/1910

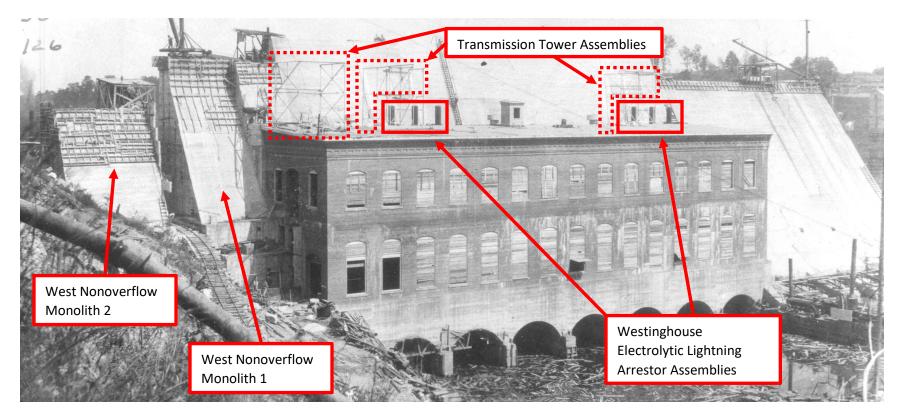


Figure 159. Spillway Monolith 15 Construction Progress as of 9/26/1910

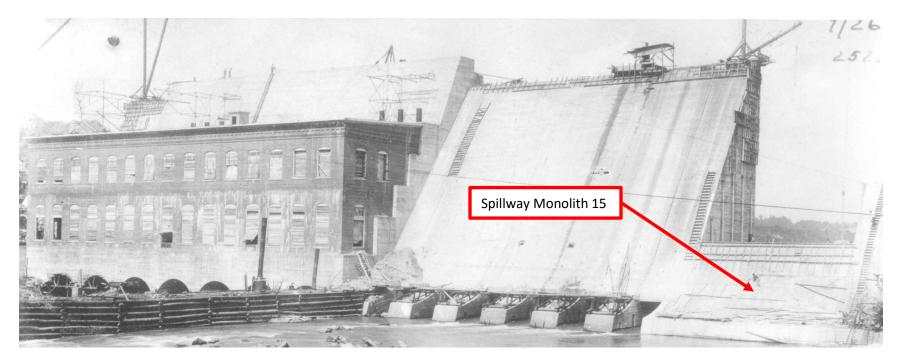


Figure 160. Spillway Monolith 15 Construction Progress as of 10/1/1910

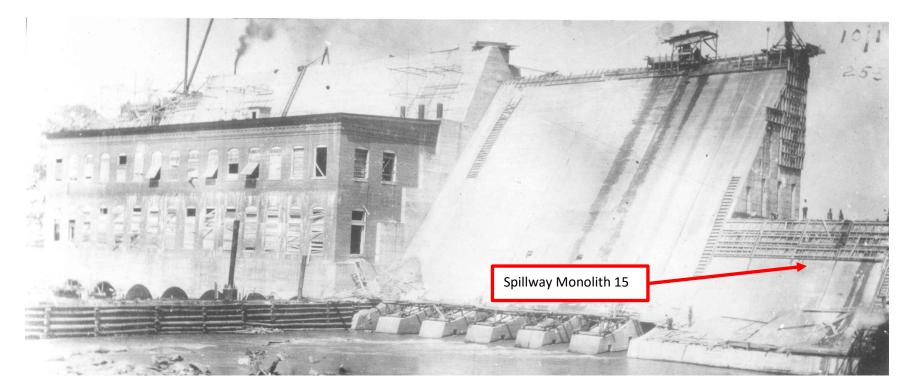


Figure 161. Upstream Cleanup

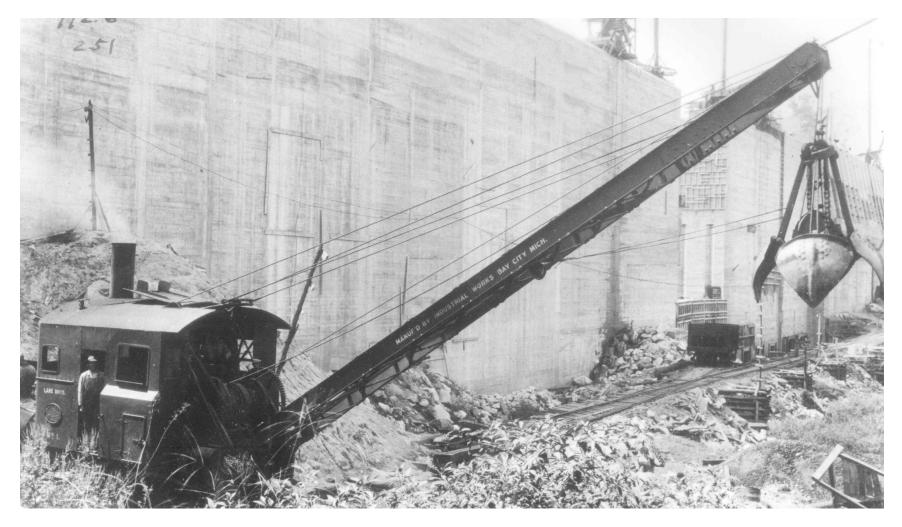


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Figure 162. West Nonoverflow Construction Progress as of 10/10/1910

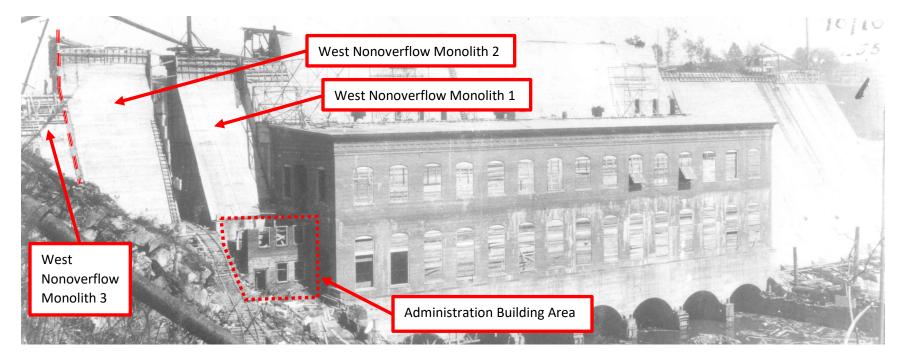


Figure 163. Spillway Monolith 15 Construction Progress as of 10/10/1910

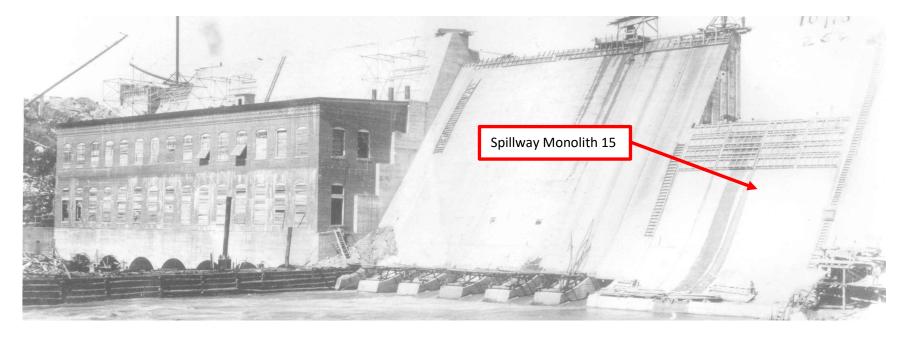


Figure 164. Headgate Operators Installation

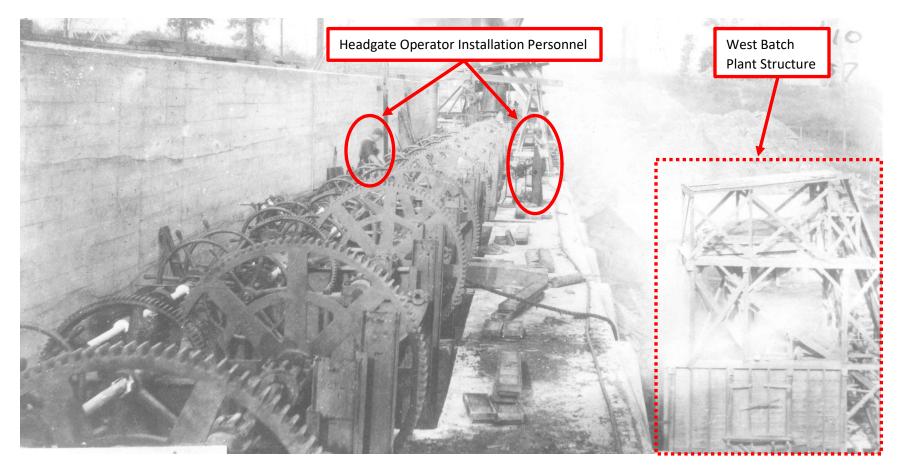


Figure 165. Spillway Construction Progress as of 10/31/1910

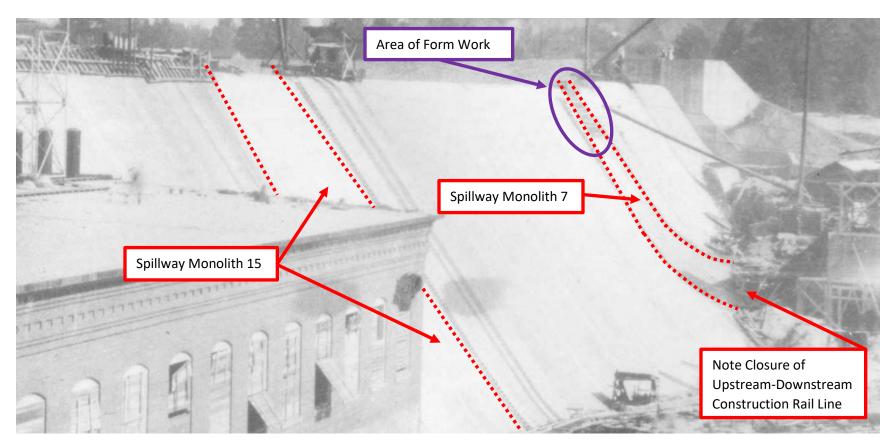


Figure 166. Powerhouse and West Nonoverflow Construction Progress as of 10/31/1910

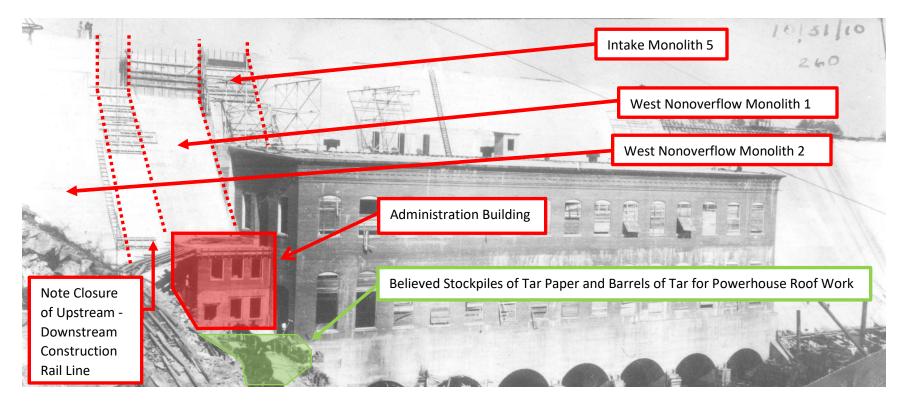


Figure 167. Tailrace Construction Work

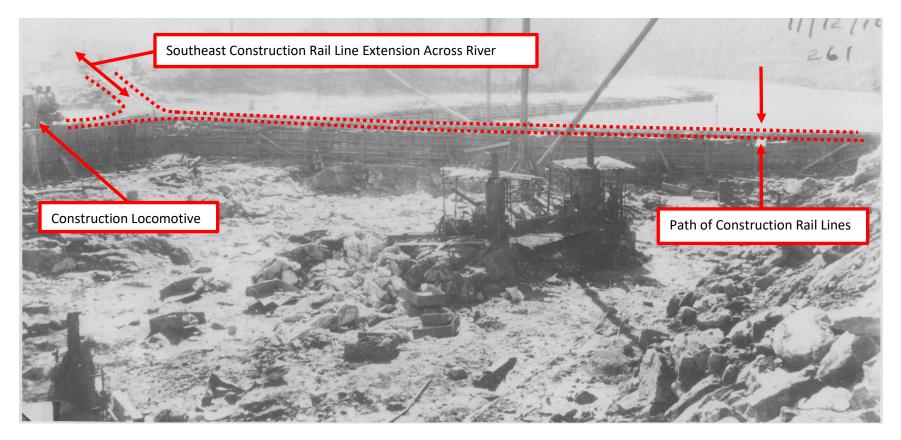


Figure 168. Administration Building Area Construction

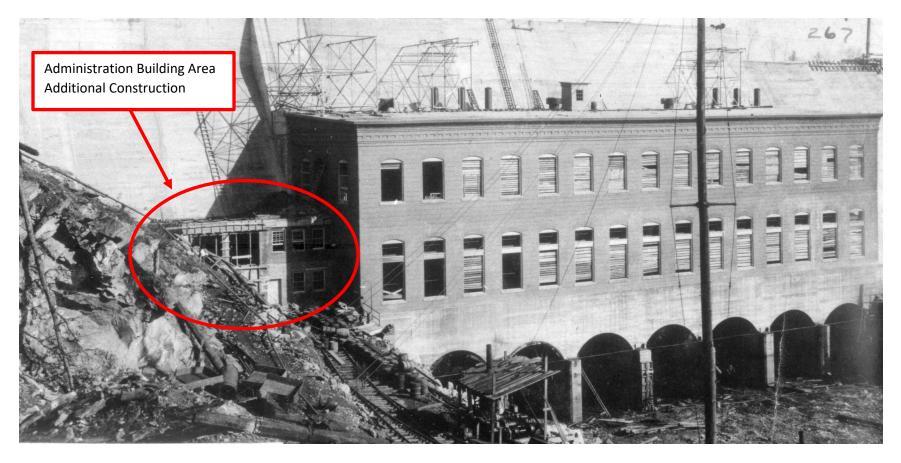


Figure 169. Last Concrete Pour

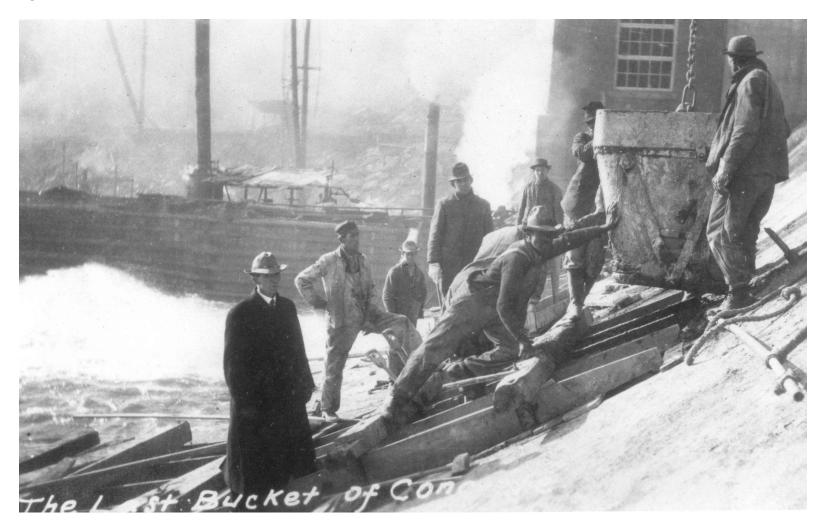


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Figure 170. Sluiceways and West Side Structures as of 12/11/1910

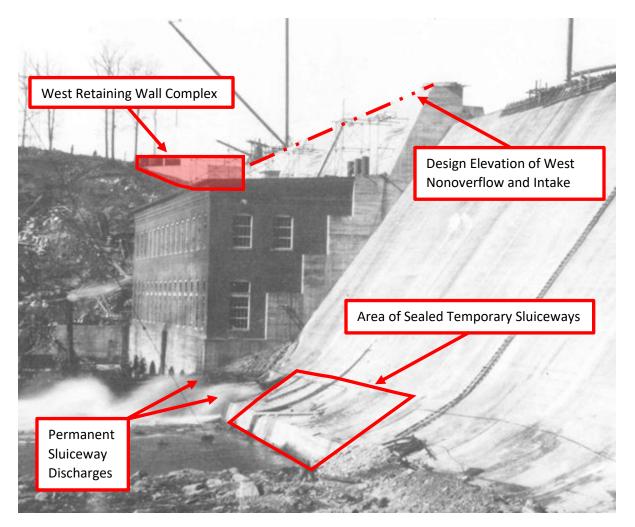


Figure 171. Operator's Platform as of 12/11/1910

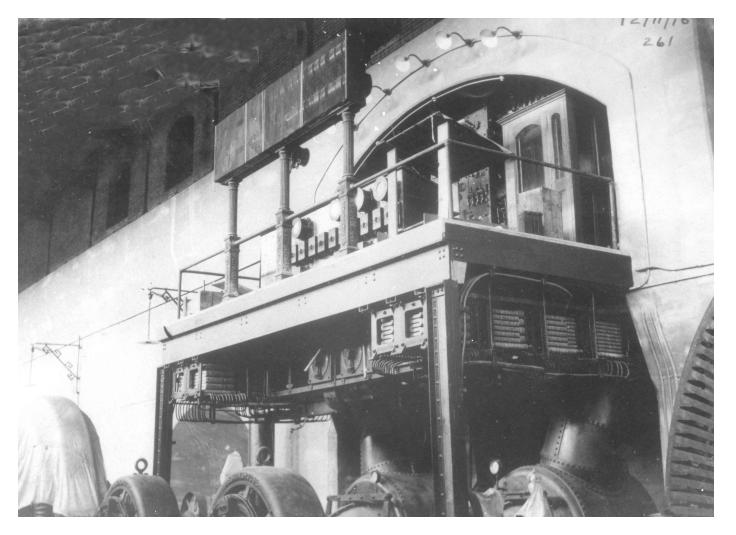


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Figure 172. Powerhouse Main Operating Floor

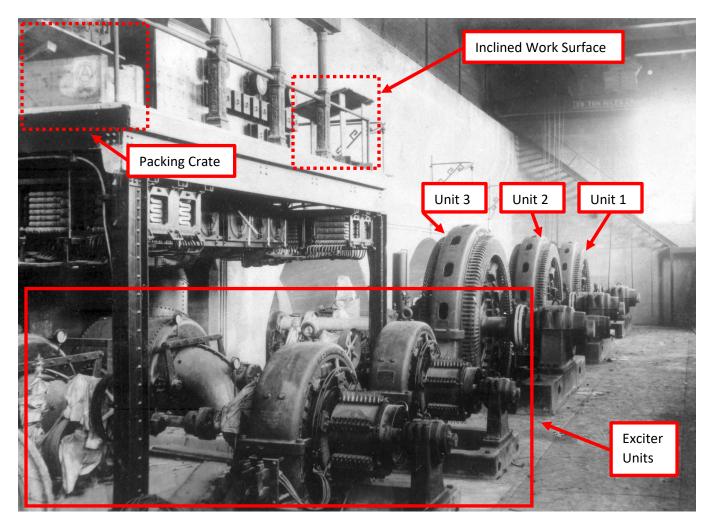


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Figure 173. Reservoir Elevation as of 1/2/1911

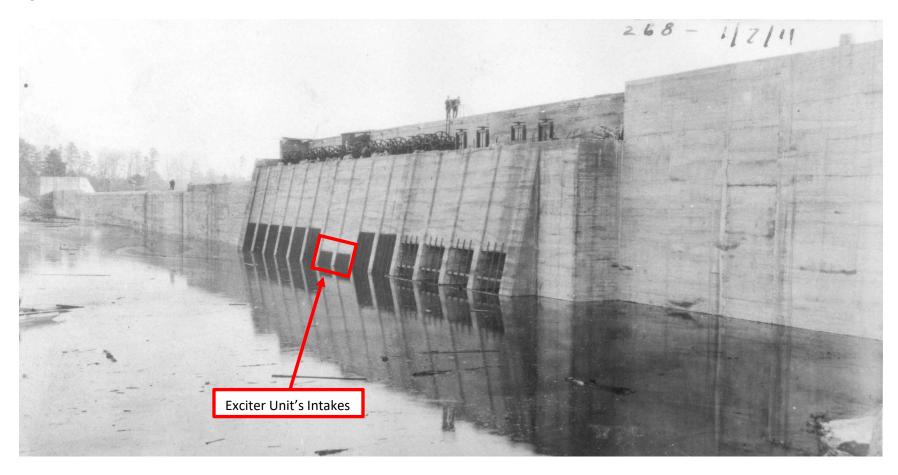


Figure 174. Spillway Crest Conditions

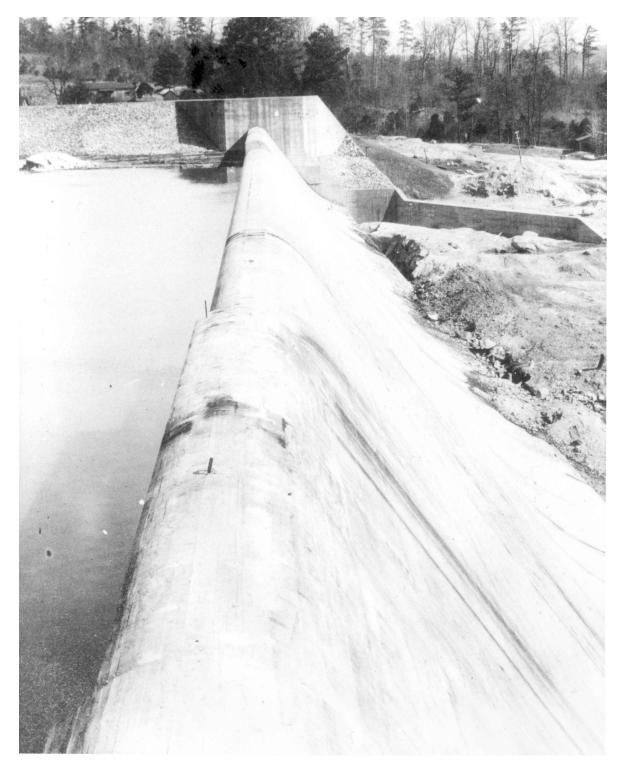


Figure 175. Downstream Panorama

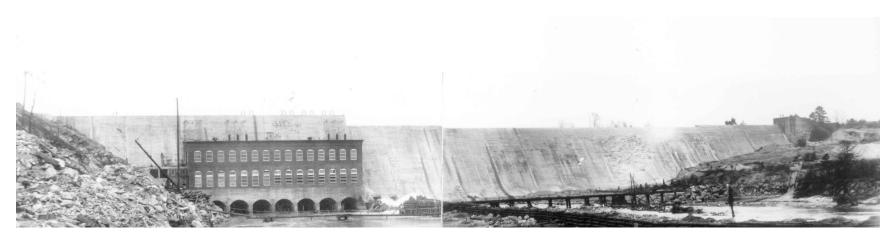


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Figure 176. Powerhouse Tailrace Area

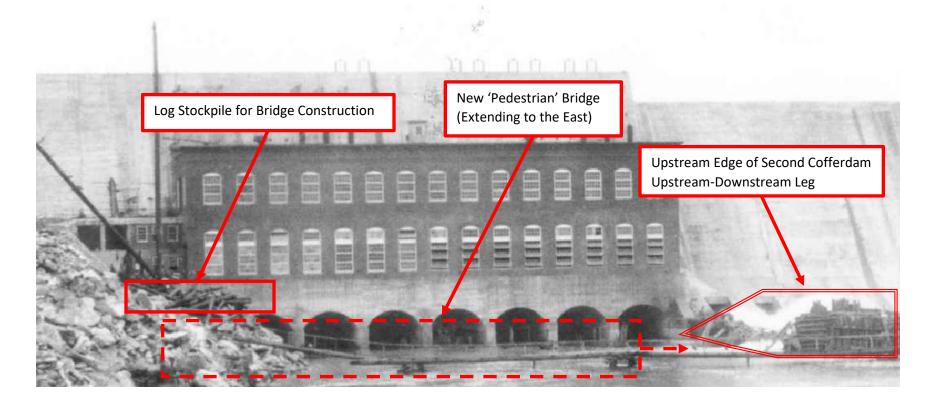


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Figure 177. Downstream Middle Spillway Area

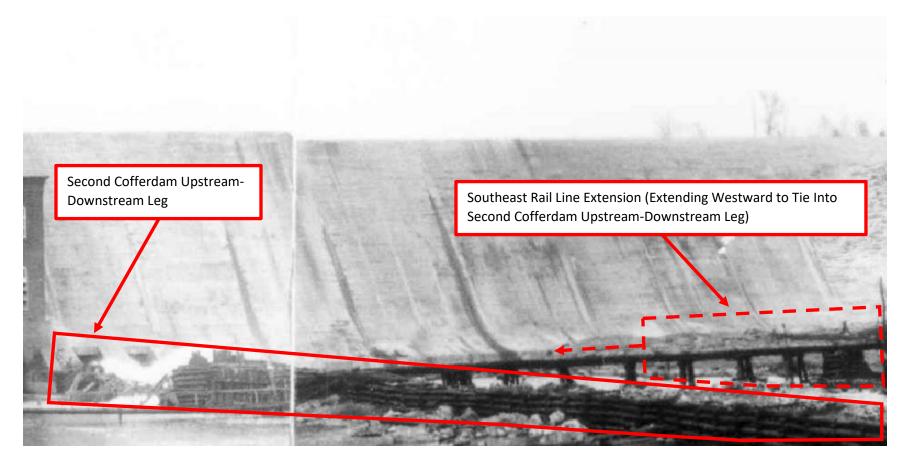


Figure 178. East Abutment Area

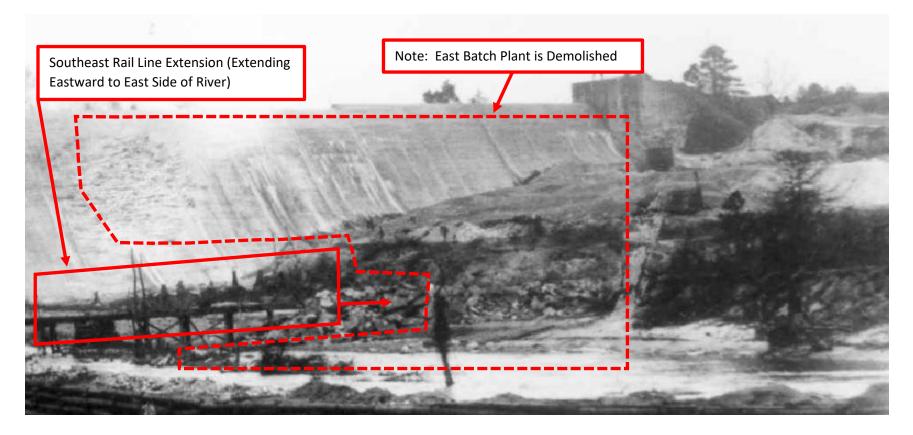


Figure 179. West Transmission Tower Complex

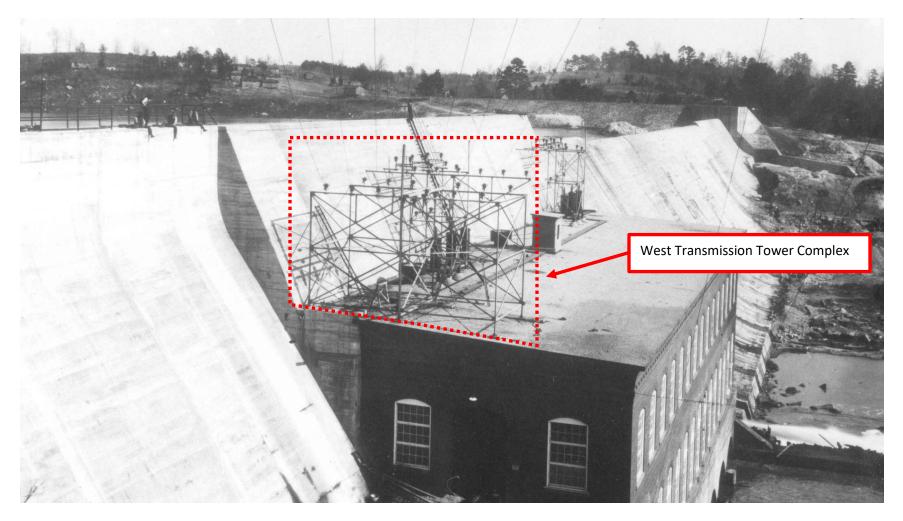


Figure 180. Powerhouse Transmission Equipment Layout

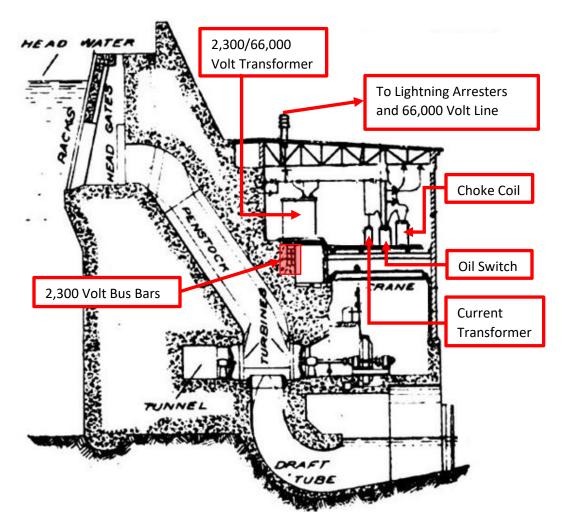


Figure 181. High-Tension-Floor 2,300/66,000 Volt Transformer, Piping, and Electrical Lines



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Figure 182. Headworks Area

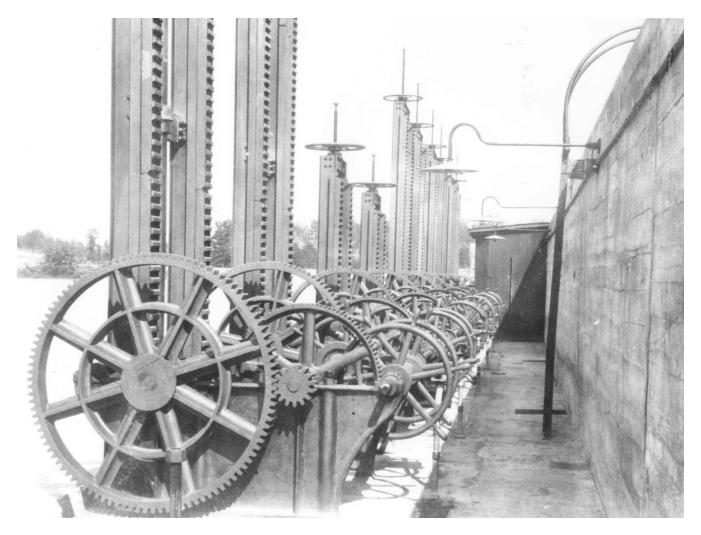


Figure 183. Powerhouse Interior Viewed Looking West

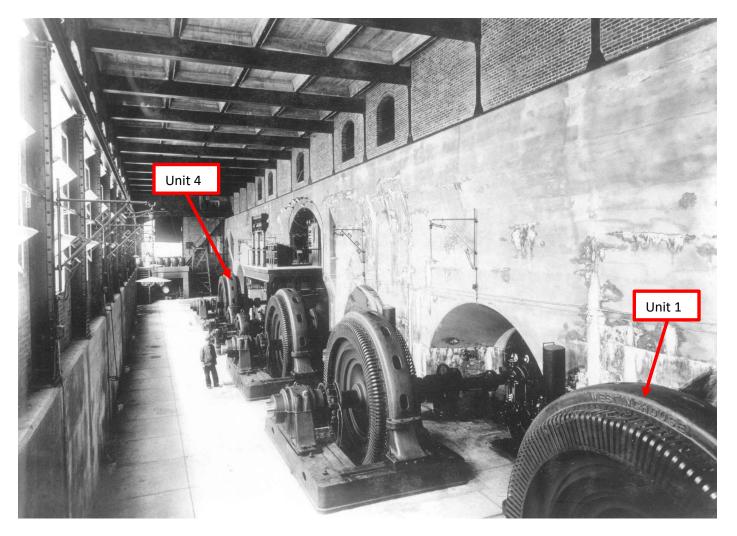


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Figure 184. Powerhouse Interior Viewed Looking East

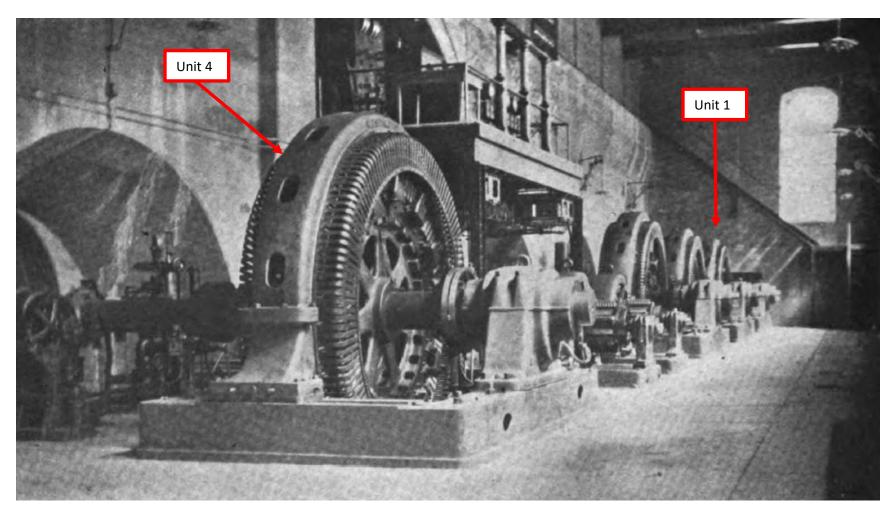


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Figure 185. Desk Switchboard and Instrument Rack

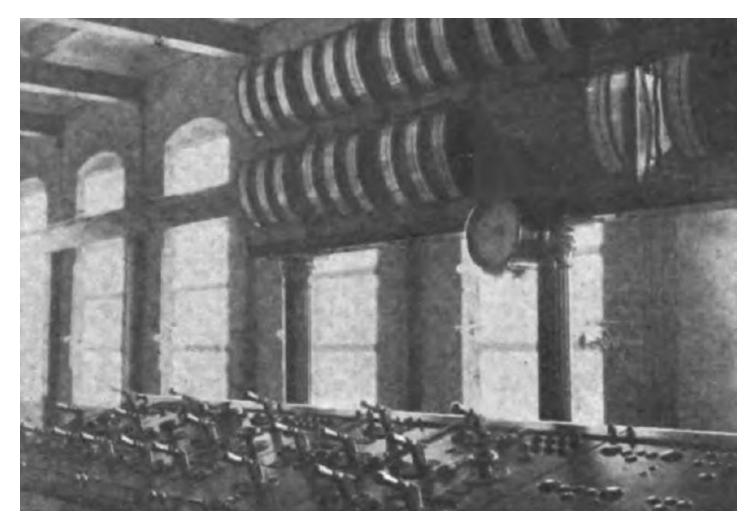


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Figure 186. Desk Switchboard Detail

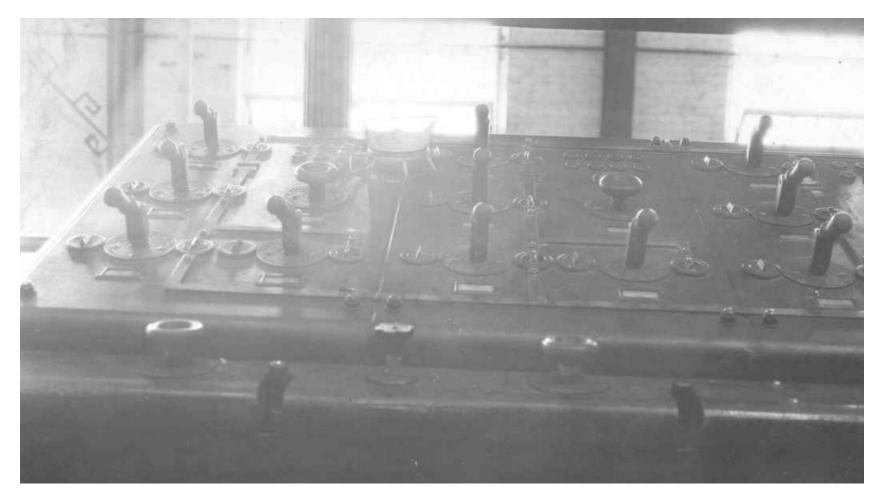


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Figure 187. Turbine Downstream Headcover Area

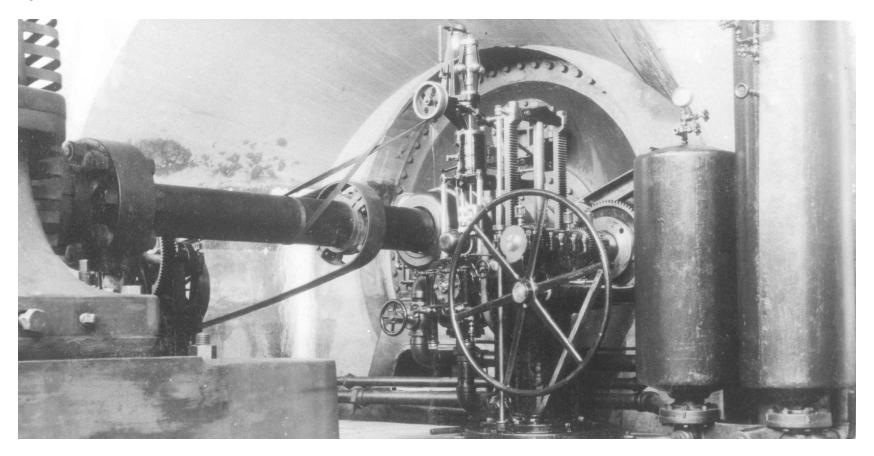


Figure 188. High-Tension-Floor Area

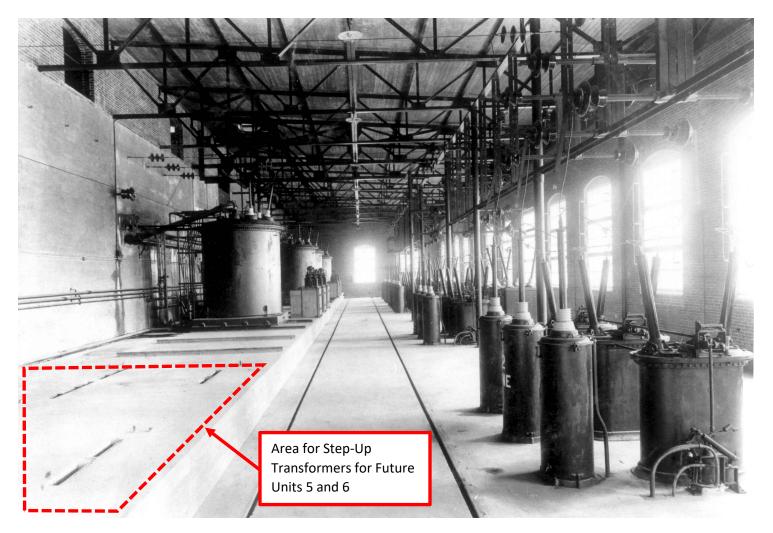


Figure 189. East Transmission Tower

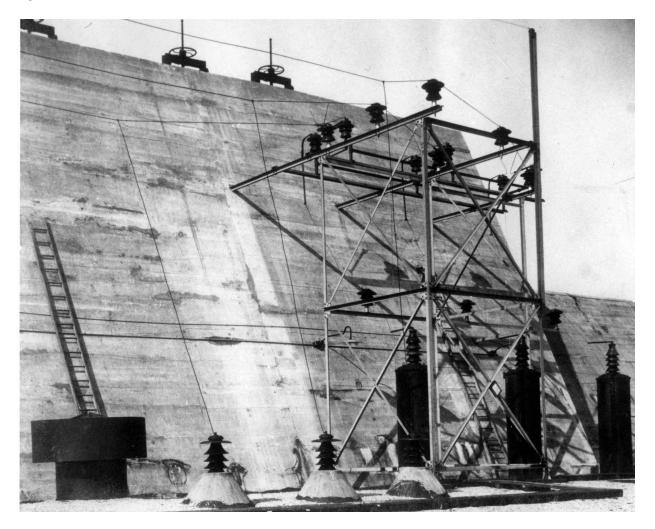


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Figure 190. Powerhouse and Spillway Downstream Areas

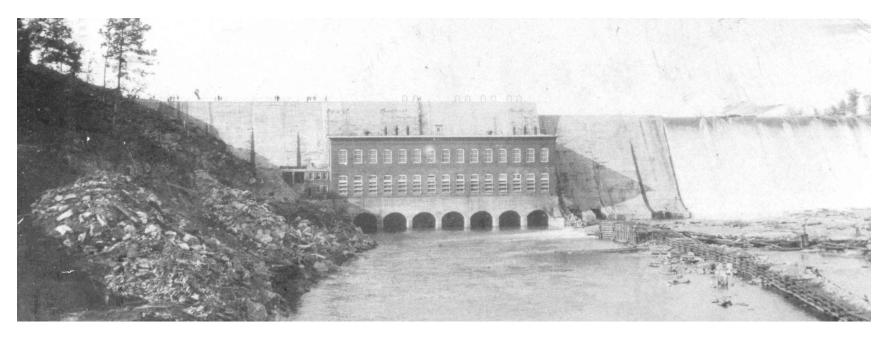


Figure 191. Southeast Construction Rail Line

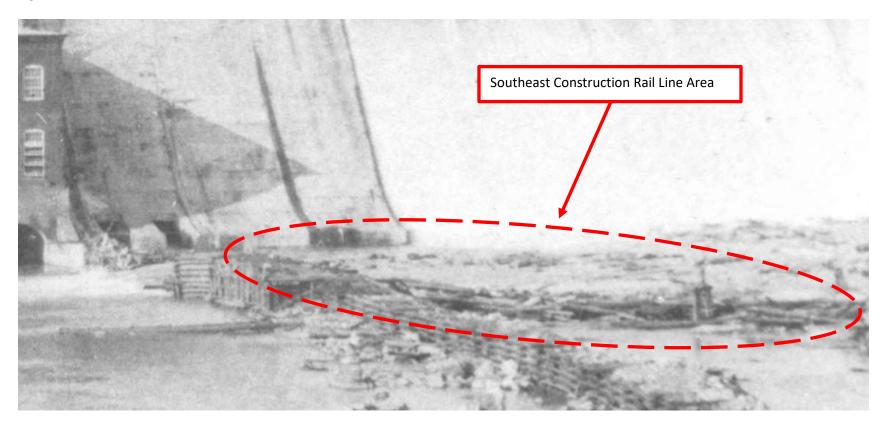


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Figure 192. Pedestrian Bridge

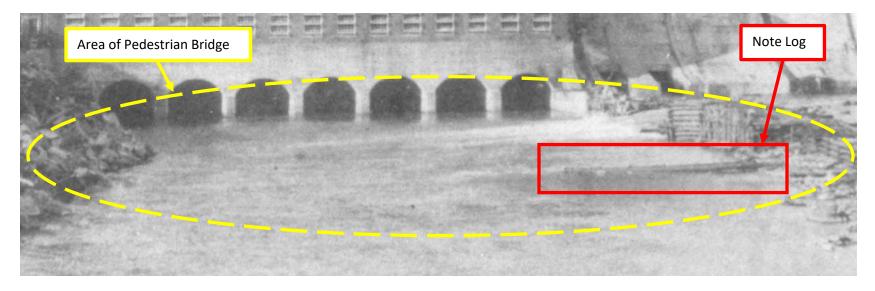


Figure 193. Second Cofferdam Upstream-Downstream Leg

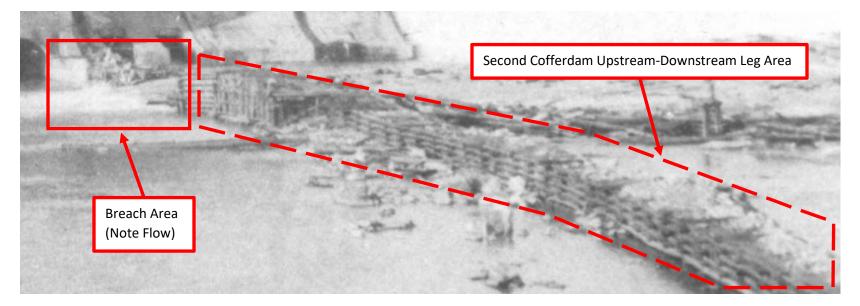


Figure 194. Second Cofferdam Upstream-Downstream Leg Breach Area

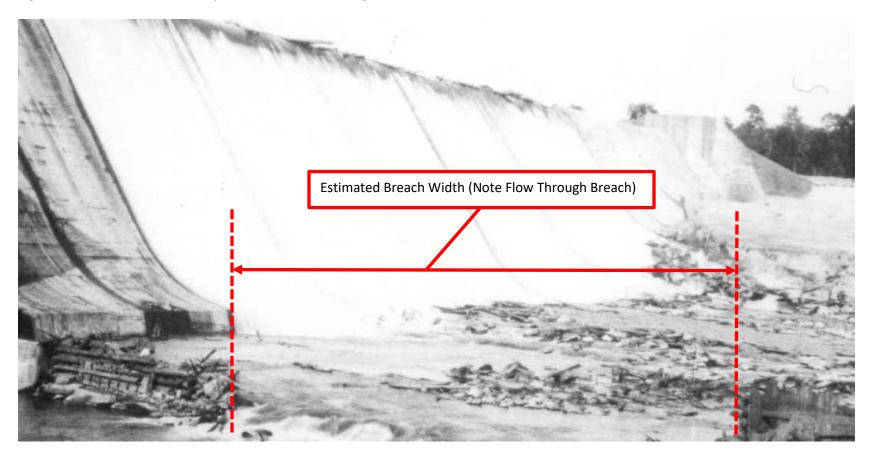


Figure 195. Spillway Crest and Debris



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Figure 196. Completed Spillway Crest

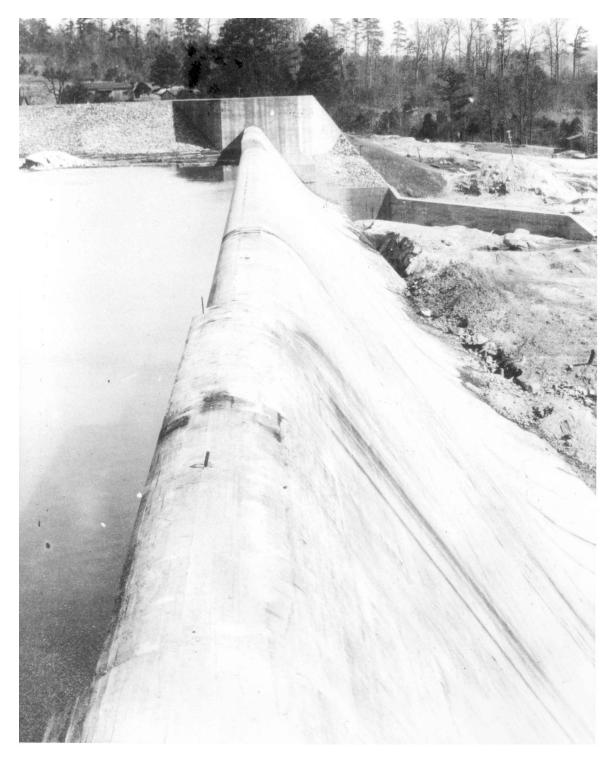


Figure 197. Three Foot Flashboard Installation

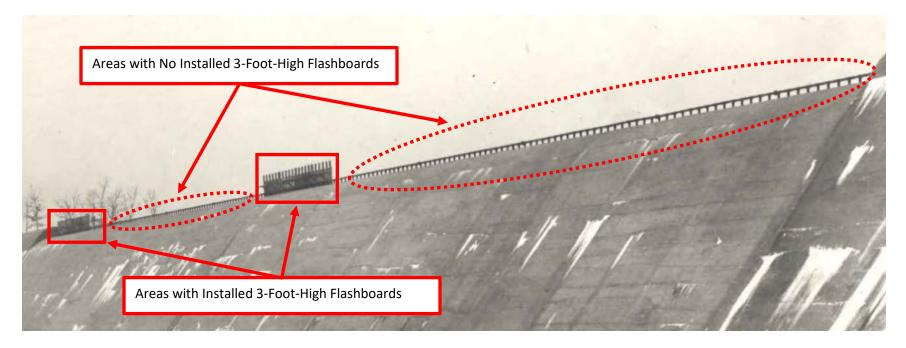
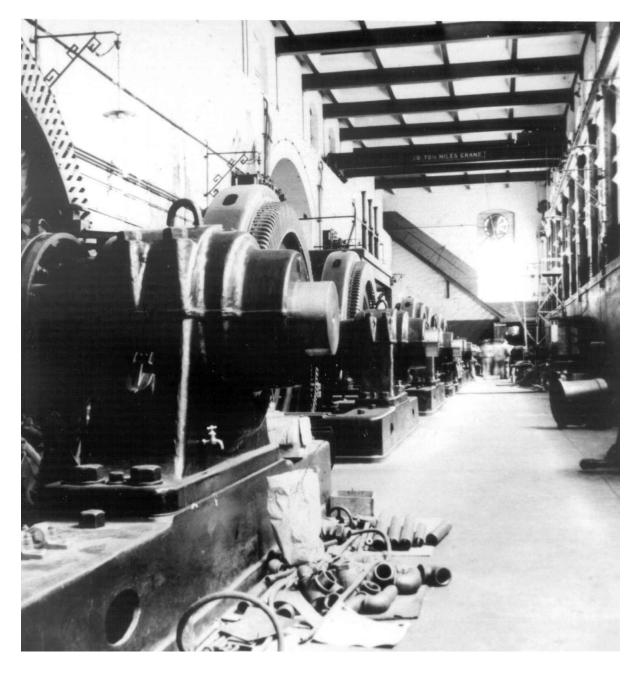


Figure 198. Potential Installation of Unit 6



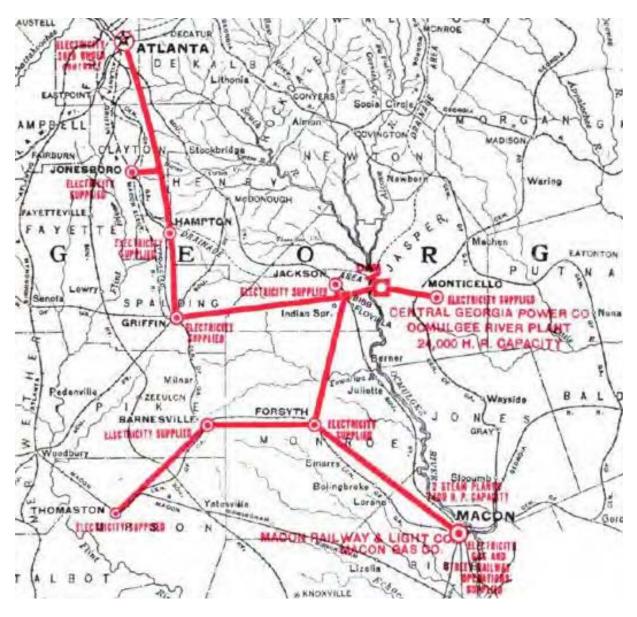


Figure 199. Georgia Light, Power and Railway Transmission Lines and Lloyd Shoals

Figure 200. Period Dress and Background Flashboards

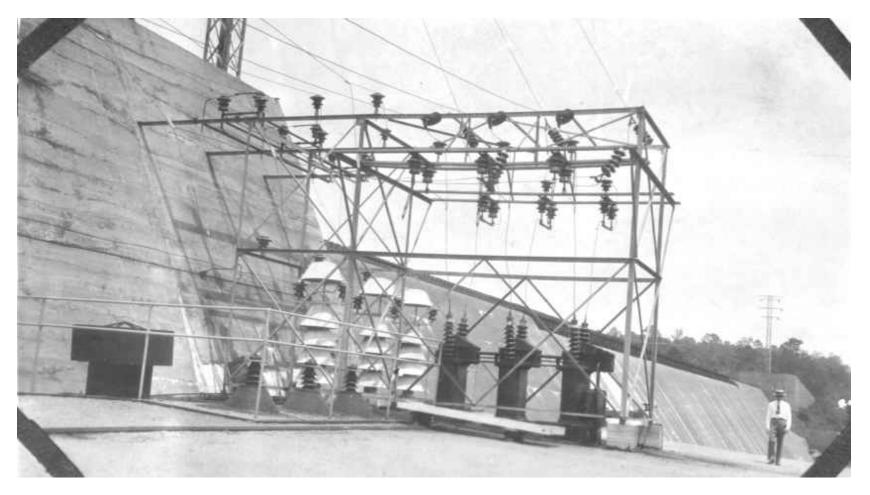


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Figure 201. Full Flashboard Installation



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Figure 202. Completed First Trash Gate

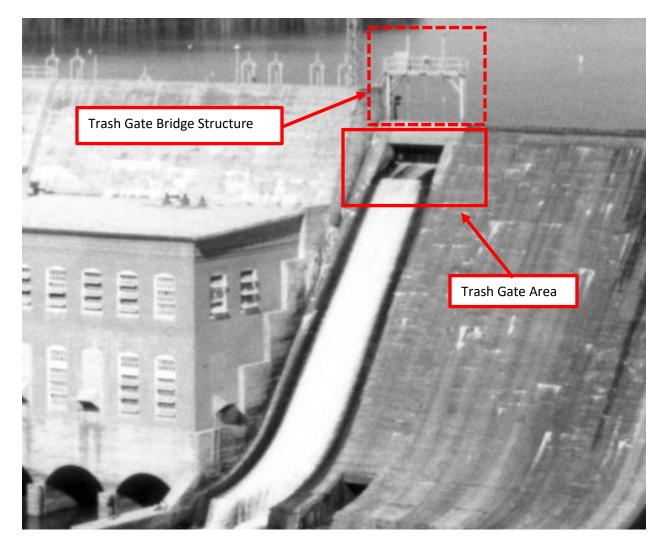


Figure 203. January 1983 Powerhouse Fire Damage



Figure 204. Fire Damaged Unit 6 Generator



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Figure 205. Reconstructed Powerhouse Upper Level

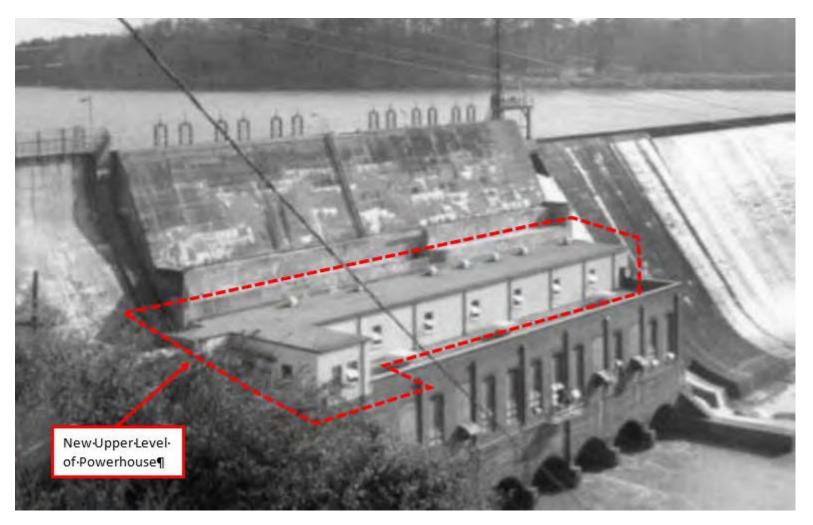


Figure 206. Solid State Exciters



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Figure 207. Relocated Electrical Equipment



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Figure 208. 1991 East Earth Embankment Modifications



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Figure 209. Plan View Aeration Weir

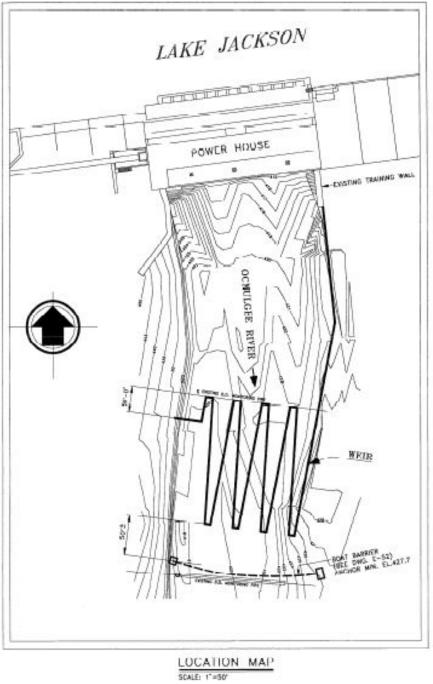


Figure 210. Flooding from Tropical Storm Alberto



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Figure 211. Weir Wall as of 8/10/2004

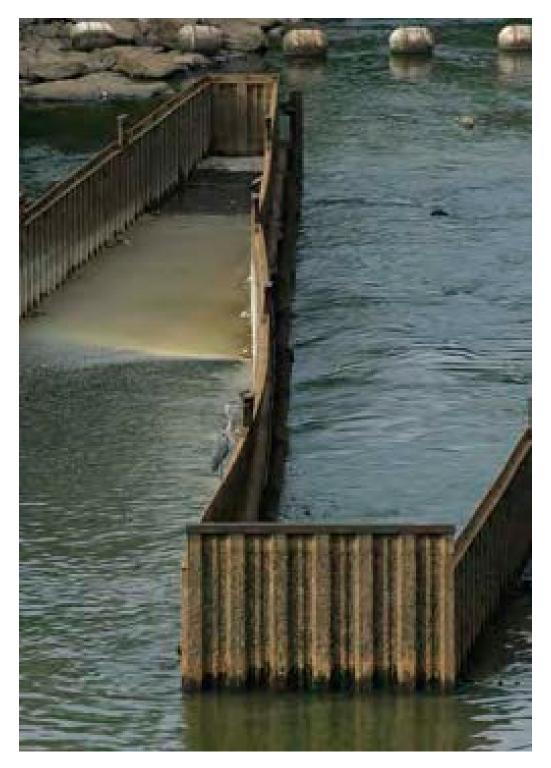


Figure 212. Sheet Piling Tear



Figure 213. Separated Weir Wall

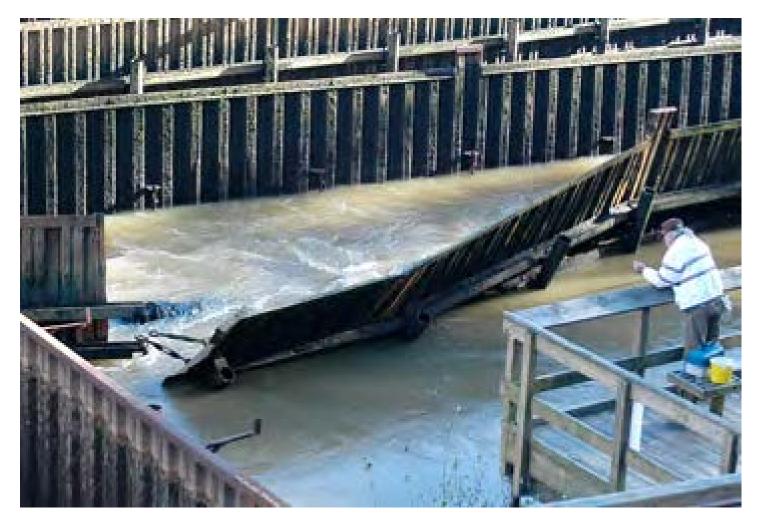


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Figure 214. Oxygenation Weir as of 1/10/2005



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Figure 215. Spillway Discharges on 7/14/2005



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Figure 216. High Water Event on 7/14/2005



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Figure 217. Weir Failure

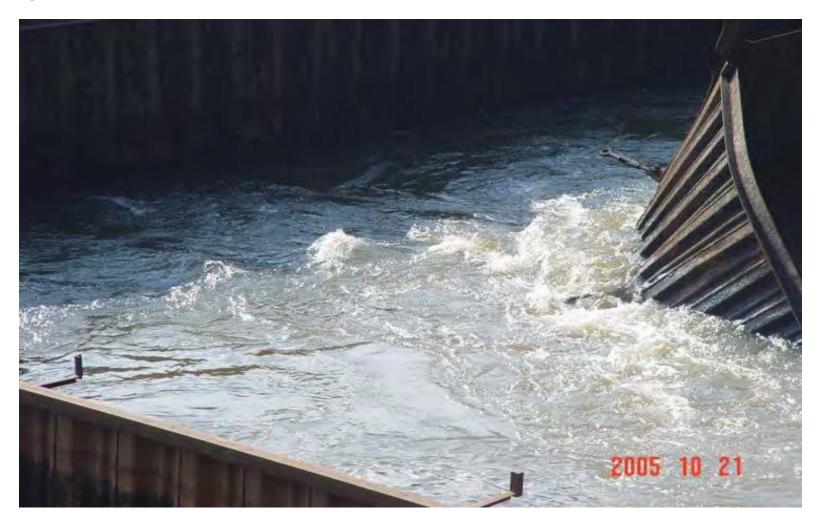


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Figure 218. Weir Removal as of 6/26/2008



Figure 219. Monitor Piping Removal



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Figure 220. Typical Cutting Method



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Figure 221. Weir Demolition as of 7/7/2008



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Figure 222. Weir Demolition as of 9/17/2008



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Figure 223. Weir Demolition as of 10/15/2008

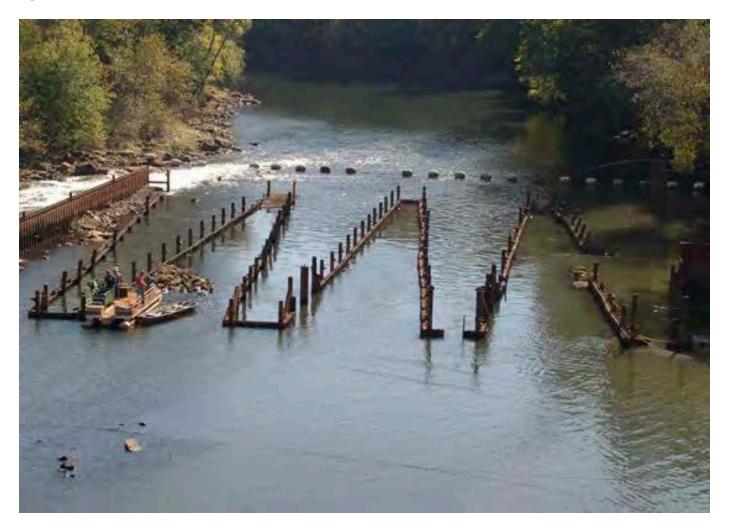


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Figure 234. Coring Aeration Pipe Penetration



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Figure 225. Grouted 6 Inch Diameter Pipes



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Figure 226. Plan View of Aeration System

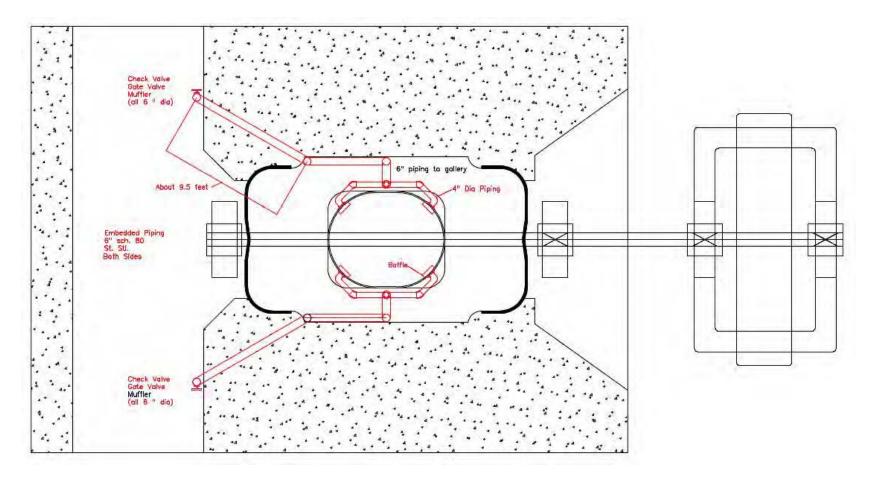


Figure 227. External Aeration Equipment



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Figure 228. Internal Water Chest Aeration Piping

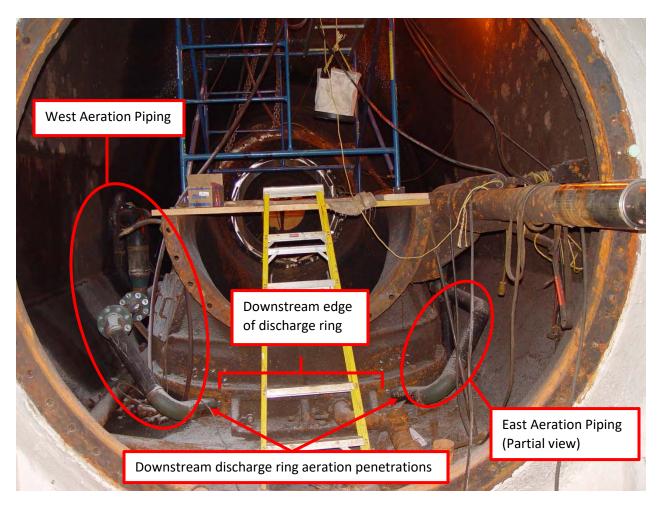


Figure 229. Qualitative Turbine Discharge Comparisons

Turbine Discharges with Aeration System Off



Turbine Discharges with Aeration System On



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Lloyd Shoals Hydroelectric Project FERC Project Number 2336-094

Exhibit C Appendix A

CEII Contains Critical Energy Infrastructure Information – Do Not Release

Prepared by

Southern Company Generation Hydro Services

December 2021

Georgia Power Company Lloyd Shoals Project P-2336 Exhibit C, Appendix A

CEII – Contains Critical Energy Infrastructure Information Do Not Release

Exhibit C, Appendix A contains information about existing and proposed systems and assets, the incapacity of which would negatively affect security, economic security, and public health and safety (critical infrastructure). The critical energy infrastructure information should not be released in accordance with Federal Energy Regulatory Commission regulations found at 18 C.F.R. § 388.112.

The critical energy infrastructure information includes detailed photos of the project during construction periods and is derived from engineering documents. This information: 1) contains details regarding the generation of energy; 2) could be useful to a person planning an attack on critical infrastructure; 3) is exempt from disclosure pursuant to Section (b)(7)(F) of the Freedom of Information Act, 5 U.S.C. § 552(b)(7)(F), by virtue of being "information compiled for law enforcement purposes" to the extent that release of such information "could reasonably be expected to endanger the life or physical safety of any individual"; and 4) does not merely give the location of the critical infrastructure.

See Volume 4 Exhibit C, Appendix A



Lloyd Shoals Hydroelectric Project FERC Project Number 2336-094

Exhibit D

Public

Prepared by

Southern Company Generation Hydro Services

December 2021

18 CFR § 4.51(e) Exhibit D is a statement of costs and financing. The statement must contain:

Exhibit D has a section that contains written documentation and tabular data. Exhibit D also has an appendix titled Exhibit D Appendix A. This contains written documentation and tables. This information is considered commercial and financial information which is privileged, trade secret, confidential, and not for public disclosure. This information is to be withheld from public disclosure pursuant to the requirements of 18 CFR 388.112.

Where these two types of information are referenced in the write up of Exhibit D, the information is referenced as either Exhibit D or Exhibit D Appendix A.

18 CFR § 4.51(e)(1) If the application is for an initial license, a tabulated statement providing the actual or approximate original cost (approximate costs must be identified as such) of:

Georgia Power Company (Georgia Power) is not filing for an initial license, so this section does not apply.

18 CFR § 4.51(e)(1)(i) Any land or water right necessary to the existing project; and

Georgia Power is not filing for an initial license, so this section does not apply.

18 CFR § 4.51 (e)(1)(ii) Each existing structure and facility described under paragraph (b) of this section (Exhibit A).

Georgia Power is not filing for an initial license, so this section does not apply.

18 CFR § 4.51(e)(2) If the applicant is a licensee applying for a new license, and is not a municipality or a state, an estimate of the amount which would be payable if the project were to be taken over pursuant to section 14 of the Federal Power Act upon expiration of the license in effect, including:

The requested information is presented in the following sections.

18 CFR § 4.51(e)(2)(i) Fair Value:

This information is presented in Exhibit D Appendix A in the section titled Written Documentation, in the subsection titled Fair Value.

18 CFR § 4.51(e)(2)(ii) Net Investment:

This information is presented in Exhibit D Appendix A in the section titled Written Documentation, in the subsection titled Net Investment.

18 CFR § 4.51(e)(2)(iii) Severance Damages:

This information is presented in Exhibit D Appendix A in the section titled Written Documentation, in the subsection titled Severance Damages.

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18 CFR § 4.51(e)(3) If the application includes proposals for any new development, a statement of estimated costs, including:

Georgia Power is not proposing any new development at the station at this time. As such, this requirement does not apply.

18 CFR § 4.51(e)(3)(i) The cost of any land or water rights necessary to the new development; and

Because Georgia Power is not proposing any new development at the project, no costs for land or water rights are anticipated.

18 CFR § 4.51(e)(3)(ii) The cost of the new development work, with a specification of:

Because Georgia Power is not proposing any new development at the project, no costs for: 1) major items, 2) equipment, 3) camps, 4) commissaries, 5) interest during construction, 6) overhead, 7) legal expenses, 8) taxes, 9) administrative and general expenses, or 10) contingencies are anticipated.

18 CFR § 4.51(e)(3)(ii)(A) The cost of each major item;

Because Georgia Power is not proposing any new development at the project, no costs for major items are anticipated.

18 CFR § 4.51(e)(3)(ii)(B) Indirect construction costs such as costs of construction equipment, camps, and commissaries;

Because Georgia Power is not proposing any new development at the project, no costs for construction equipment, camps or commissaries are anticipated.

18 CFR § 4.51(e)(3)(ii)(C) Interest during construction; and

Because Georgia Power is not proposing any new development at the project, no costs for interest during construction are anticipated.

18 CFR § 4.51(e)(3)(ii)(D) Overhead, construction, legal expenses, taxes, administrative and general expenses and contingencies.

Because Georgia Power is not proposing any new development at the project, no costs for overhead, construction, legal expenses, taxes, administrative and general expenses, or contingencies are anticipated.

18 CFR § 4.51(e)(4) A statement of the estimated average annual cost of the total project as proposed specifying any projected changes in the costs (life-cycle costs) over the estimated financing or licensing period if the applicant takes such changes into account, including:

The requested information is presented below.

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18 CFR § 4.51(e)(4)(i) Cost of capital (equity and debt);

This information is presented in Table D1, titled Estimated Annual Cost of Lloyd Shoals (Incremental Cost only) for 40 years in Exhibit D Appendix A. This information is presented in Table D5, titled Estimated Annual Cost of Lloyd Shoals (Incremental Cost only) for 50 years in Exhibit D Appendix A.

18 CFR § 4.51(e)(4)(ii) Local, state, and Federal taxes;

This information is presented in Table D1, titled Estimated Annual Cost of Lloyd Shoals Plant (Incremental Cost only) for 40 years in Exhibit D Appendix A. This information is presented in Table D5, titled Estimated Annual Cost of Lloyd Shoals Plant (Incremental Cost only) for 50 years, in Exhibit D Appendix A.

18 CFR § 4.51(e)(4)(iii) Depreciation or amortization;

This information is presented in Table D1, titled Estimated Annual Cost of Lloyd Shoals Plant (Incremental Cost only) for 40 years in Exhibit D Appendix A. This information is presented in Table D5, titled Estimated Annual Cost of Lloyd Shoals Plant (Incremental Cost only) for 50 years in Exhibit D Appendix A.

18 CFR § 4.51(e)(4)(iv) Operation and maintenance expenses, including interim replacements, insurance, administrative and general expenses, and contingencies and

This information is presented in Table D1, titled Estimated Annual Cost of Lloyd Shoals Plant (Incremental Cost only) for 40 years in Exhibit D Appendix A. This information is presented in Table D5, titled Estimated Annual Cost of Lloyd Shoals Plant (Incremental Cost only) for 50 years in Exhibit D Appendix A.

18 CFR § 4.51(e)(4)(v) The estimated capital cost and estimated annual operation and maintenance expense of each proposed environmental measure.

This data is presented in Table D2, titled Estimated Capital and Annual Operation Expenses for Environmental Measures for 40-year license in Exhibit D, and in Table D3, titled Estimated Capital and Annual Operation Expenses for Environmental Measures for 50-year license in Exhibit D.

18 CFR § 4.51(e)(5) A statement of the estimated annual value of project power, based on a showing of the contract price for sale of power or the estimated average annual cost of obtaining an equivalent amount of power (capacity and energy) from the lowest cost alternative source, specifying any projected changes in the cost of power from that source over the estimated financing or licensing period if the applicant takes such changes into account.

This data is presented in Tables D4 and D6, titled Estimated Annual Cost of Combustion Turbine Capacity to Replace the Lloyd Shoals Project for 40 years and Estimated Annual Cost of

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Combustion Turbine Capacity to Replace the Lloyd Shoals Project for 50 years, respectively, both of which are included in Exhibit D Appendix A.

18 CFR § 4.51(e)(6) A statement specifying the source and extent of financing and annual revenues available to the applicant to meet the costs identified in paragraphs (e)(3) and (4) of this section.

Southern Company is a holding company headquartered in Atlanta, Georgia that owns three traditional electric operating companies, as well as Southern Power, Southern Company Gas, and other direct and indirect subsidiaries. Southern Company's reportable segments are the sale of electricity by the traditional electric operating companies, the sale of electricity in the competitive wholesale market by Southern Power, and the sale of natural gas and other complementary products and services by Southern Company Gas. Southern Company's subsidiaries provide electrical and gas services directly to approximately 8.63 million customers.

As of 12/31/2020, subsidiary companies of the Southern Company owned and or operated 30 hydroelectric generating stations, 24 fossil fuel generating stations, three nuclear generating stations, 13 combined cycle/cogeneration stations, 44 solar facilities, 13 wind facilities, one fuel cell facility, and one battery storage facility. These stations had a combined name plate capacity of 42,548,367 KW.

The three traditional electric operating companies, Georgia Power, Alabama Power and Mississippi Power, operate generating plants serving 4.3 million retail customers in a 116,000 square-mile service territory comprising most of the states of Alabama and Georgia, together with southeastern Mississippi.

Georgia Power is an investor owned, tax-paying, public utility headquartered in Atlanta, Georgia. Georgia Power operates as a vertically integrated utility providing electric service to retail customers within its service area in the State of Georgia and to wholesale customers in the Southeast. Georgia Power is the largest of Southern Company's three traditional subsidiary electric utilities as measured by installed capacity. It has a generation fleet totaling 14,413,456 KW installed capacity with the hydro fleet representing 1,099,882 KW. Georgia Power employs approximately 6,700 workers and has a total of 2,635,000 customers. The following table presents a breakdown of these customers by classes:

Customer Class	Number
Residential	2,296,000
Commercial	319,000
Industrial	11,000
Other	10,000
Total	2,635,000

As of December 31, 2020, Georgia Power's total assets were valued at \$47,080 million and liabilities and stockholder's equity also totaled \$47,080 million. Operating revenues for 2020 were \$8,309 million. Total operating expenses were \$6,337 million. Net cash provided from

operating activities totaled \$2,784 million. Cash and cash equivalents at the end of 2020 totaled \$9 million. As of December 31, 2020, Georgia Power's balance of net income, common stock, paid-in capital, other comprehensive income after cash dividends on common stock was \$16,501 million. In 2020, Georgia Power's retail return on equity (ROE) was within an allowable 9.5% to 12% range.

The following presents a summary of operating revenues and operating expenses as of December 31, 2020.

Operating Revenues	Category	Amount (In Millions)
	Residential	\$3,476
	Commercial	\$2,933
	Industrial	\$1,197
	Other	\$60
	Wholesale – PPA energy	\$42
	revenues	
	Wholesale – PPA capacity	\$450
	revenues	
	Non-PPA Revenues	\$10
	Other Revenues	447
	Other Revenue Sources	94
Total		\$8,309

Operating Expenses	Category	Amount (in Millions)
	Fuel	\$1,141
	Purchased Power – Non-affiliates	\$540
	Purchased Power – Affiliates	\$509
	Other Operations and	\$1,953
	Maintenance	
	Depreciation and Amortization	\$1,425
	Taxes Other Than Income Taxes	\$444
	Income Taxes	\$152
	Estimated loss on Plant Vogtle Units 3 and 4	\$325

Outside independent auditors concluded that Georgia Power's financial condition remained stable as of December 31, 2020. Georgia Power plans to finance future cash needs from operating cash flows, external securities issuances, borrowings from financial institutions, equity contributions from Southern Company, and borrowings through the Federal Financing Bank (FFB). As of December 31, 2020, Georgia Power had \$1,728 million in unused committed credit arrangements with banks. Georgia Power makes short term borrowings primarily through commercial paper programs that have the liquidity support of the committed bank credit

arrangement.

18 CFR § 4.51(e)(7) An estimate of the cost to develop the license application; and

The estimate of the cost to develop the license application consists of not only the actual amounts expended to date, but also an estimate of the costs that will occur in the future, between when the license application is filed in 2021 and until FERC issues a new license in 2023. These latter costs are also included as part of the cost of developing a completed license application. Since these costs will occur in the future, their actual values are not known with certainty. Georgia Power has made an estimation of these costs and these are reflected in the total estimated project relicensing cost as outlined in the following table.

Cost Category	Cost (\$)
Actual Expenses for Period of Year 2017 to December 2020	\$2,266,688
Estimated Expenses for 2021 to 2023	\$1,596,000
Total Estimated Project Relicensing Cost	\$3,862,688

18 CFR § 4.51(e)(8) The on-peak and off-peak values of project power, and the basis for estimating the values, for projects which are proposed to operate in a mode other than runof-river; and

The following table presents the requested information for years 2021-2041.

Avoided Cost Projections

	4822 Avoided Cost - Non-Intermittent Qualifying Facilities					
	Avoided Capacity Cost	Avoided Energy Cost				
		Peak Season:	Peak Season:	Peak Season:	Non-Peak Season:	Annual
		All Hours	Peak Hours	Off-Peak Hours	All Hours	All Hours
Year	\$/KW-yr	\$/MWh	\$/MWh	\$/MWh	\$/MWh	\$/MWh
2021	0.00	27.17	30.81	24.83	25.27	25.90
2022	0.00	26.04	28.92	24.19	24.08	24.73
2023	0.00	28.46	32.01	26.23	25.00	26.16
2024	0.00	29.80	33.41	27.58	24.40	26.20
2025	0.00	30.80	34.30	28.60	25.41	27.21
2026	0.00	32.89	36.06	30.86	27.42	29.25
2027	0.00	34.73	38.41	32.37	28.90	30.85
2028	0.00	35.53	39.21	33.22	29.54	31.54
2029	0.00	36.40	40.46	33.89	30.24	32.30
2030	73.78	36.90	40.96	34.39	30.51	32.64
2031	75.17	30.96	33.92	29.10	27.85	28.89
2032	76.59	32.19	35.14	30.30	28.70	29.86
2033	78.04	33.84	37.44	31.54	29.88	31.21
2034	79.52	35.51	39.44	33.04	31.33	32.73
2035	81.03	36.01	39.92	33.60	32.02	33.36
2036	82.56	35.49	38.59	33.54	32.48	33.48
2037	84.13	37.77	40.49	36.02	33.80	35.12
2038	85.72	39.30	40.95	38.24	35.71	36.91
2039	87.35	40.61	41.63	39.96	36.90	38.14
2040	89.01	42.14	42.73	41.78	38.16	39.49
2041	90.70	46.50	45.54	47.09	42.65	43.94

Georgia Power Company - Energy Budget 2021

The peak period used in the projection are June through September months. These values are based on Georgia Power's avoided costs. In 2030, Georgia Power is expected to need to add firm capacity to meet demand on the power system and thus there is a capacity charge in addition to an energy charge beginning in 2030. This data is available on the internet at the Georgia Public Service Commission's (GPSC's) website <u>http://www.psc.state.ga.us</u>. The docket number is 4822.

18 CFR § 4.51(e)(9) The estimated average annual increase or decrease in project generation, and the estimated average annual increase or decrease of the value of project power due to a change in project operations (i.e., minimum bypass flows, limits on reservoir fluctuations).

Georgia Power does not expect an increase or decrease in project generation.

Summary Table

Tables Locations

Table Number	Title	Location
D1	Estimated Annual Cost of the Lloyd Shoals	Exhibit D Appendix A
	Project (Incremental Cost only) for 40 years	
D2	Estimated Capital and Annual Operation	Exhibit D
	Expenses for Environmental Measures for	
	40-year license	
D3	Estimated Capital and Annual Operation	Exhibit D
	Expenses for Environmental Measures for	
	50-year license	
D4	Estimated Annual Cost of Combustion	Exhibit D Appendix A
	Turbine Capacity to Replace the Lloyd	
	Shoals Project for 40 years	
D5	Estimated Annual Cost of the Lloyd Shoals	Exhibit D Appendix A
	Project (Incremental Cost only) for 50 years	
D6	Estimated Annual Cost of Combustion	Exhibit D Appendix A
	Turbine Capacity to Replace the Lloyd	
	Shoals Project for 50 years	

Item	Major Category	Components	O&M \$	Total O&M \$ for 40-year license term	Capital \$
1	Operational Measures to	Enhance Summer DO			
1.1		Prepare an operational procedure for the draft tube aeration system that specifies priority for the use of aerating units under different generation scenarios.			\$1,000
1.2		Seasonal DO and temperature monitoring in one season to verify the DO-enhancing performance of the passive draft tube aeration system with implementation of the Passive Draft Tube Aeration System Operational Procedure	\$50,000	\$50,000	\$20,000
1.3		Generation Loss – reduced efficiency due to operation of aeration system according to new plan	\$148,000	\$5,920,000	
2	Terrestrial Invasive Vege	tation Monitoring and Treatment			
2.1		Every three years, monitor invasive exotic plant occurrences at Ocmulgee River Park and in the area of the project works/Tailrace Fishing Pier and treat invasive exotic plant populations as necessary to support public access and utilization of these sites	\$8,000	\$104,000	
3	Recreation Improvement	ts			
3.1	Recreation Management Plan	Revision of the Recreation Management Plan to Match Final FERC Order Language			\$1,000
3.2	Lloyd Shoals Boat Ramp (former Jane Lofton Public Access Area)	Enhance recreation amenities by constructing a new two- lane boat ramp, a barrier-free fishing pier, barrier-free parking next to the fishing pier, a restroom with a flush toilet, and expanded parking. O&M Costs include Georgia Power personnel to monitor and maintain park.	\$35,000	\$1,400,000	\$1,100,000

Table D2 Estimated Capital and Annual Operation Expenses for Environmental Measures for 40-year license

Item	Major Category	Components	0&M \$	Total O&M \$ for 40-year license term	Capital \$
3.3	Lloyd Shoals Park	Demolish existing boat ramp and construct a non- motorized boat (canoe/kayak) step-down ramp in its place, replacing the existing courtesy dock with a barrier- free fishing pier, construct barrier-free parking next to the new fishing pier, restripe existing parking areas for vehicle-only spaces, and update the existing restroom and bathhouse. These improvements would enhance access for canoeing, kayaking, and bank fishing, alleviate parking congestion on peak-use weekends, and continue to support quality recreation opportunities. O&M Costs include Georgia Power personnel to monitor and maintain park.	\$35,000	\$1,400,000	\$800,000
		Additional O&M costs include contract personnel responsible for cleaning, trash pick-up, landscaping, and park management.	\$10,000	\$400,000	
3.4	Ocmulgee River Park	Enhance recreation amenities at Ocmulgee River Park by rehabilitating the existing boat ramp, redefining and paving the existing parking area, landscaping with boulders to discourage parking near the shoreline, installing one concrete-lined vault toilet, and relocating picnic tables closer to the existing parking area. O&M Costs include Georgia Power personnel to monitor and maintain park.	\$25,000	\$1,000,000	\$350,000
		Additional O&M costs include contract personnel responsible for cleaning, trash pick-up, landscaping, and park management costs.	\$10,000	\$400,000	
3.5	Tussahaw Creek Public Access Area	Enhance recreational access to Lake Jackson by developing formal access on Georgia Power land at the Highway 36 Bridge at Tussahaw Creek. New amenities would be constructed to include a paved access road off	\$30,000	\$1,200,000	\$500,000

Item	Major Category	Components	O&M \$	Total O&M \$ for 40-year license term	Capital \$
		of Winding Way, a paved parking area with 10 parking			
		spaces of which two will be accessible, one picnic table			
		and one trash can, and a paved sidewalk leading to bank			
		fishing areas and a step-down ramp for			
		canoeing/kayaking access. O&M costs include Georgia			
		Power personnel to monitor and maintain park.			
		Additional O& M costs include personnel responsible for cleaning, trash pick-up, landscaping, and park	\$10,000	\$400,000	
		management costs.			
4	Cultural Resources Educa	· · · · · · · · · · · · · · · · · · ·			
4.1		Implement a Historic Properties Management Plan	\$1,000	\$40,000	\$50,000
		through a Programmatic Agreement to assure the			
		preservation and long-term management of			
		archaeological sites and historic buildings and structures			
		within the project boundary.			
5	Shoreline Management	· · · · · · ·	•		
5.1	Shoreline Management Plan	Revision of the Shoreline Management Plan in accordance with the existing Shoreline Management	\$10,000	\$400,000	\$1,000
		Guidelines for Georgia Power Lakes. Implementation of			
		the SMP to promote the maintenance of vegetative			
		buffers around the reservoir to protect water quality,			
F 2		aquatic habitat, and cultural and aesthetic resources.	675.000	<u> </u>	
5.2	Shoreline Maintenance	One dedicated shoreline specialist responsible for the	\$75,000	\$3,000,000	
	Personnel	permitting, compliance, and inspection of shoreline			
		facilities on Lake Jackson			
i otal /	All Environmental Measure	S		\$15,714,000	\$2,823,000

Item	Major Category	Components	0&M \$	Total O&M \$ for 50-year license term	Capital \$
1	Operational Measures to	Enhance Summer DO			
1.1		Prepare an operational procedure for the draft tube aeration system that specifies priority for the use of aerating units under different generation scenarios.			\$1,000
1.2		Seasonal DO and temperature monitoring in one season to verify the DO-enhancing performance of the passive draft tube aeration system with implementation of the Passive Draft Tube Aeration System Operational Procedure	\$50,000	\$50,000	\$20,000
1.3		Generation Loss – reduced efficiency due to operation of aeration systems.	\$148,000	\$7,400,000	
2	Terrestrial Invasive Veget	tation Monitoring and Treatment	1		
2.1		Every three years, monitor invasive exotic plant occurrences at Ocmulgee River Park and in the area of the project works/Tailrace Fishing Pier and treat invasive exotic plant populations as necessary to support public access and utilization of these sites.	\$8,000	\$128,000	
3	Recreation Improvement	S			
3.1	Recreation Management Plan	Revision of the Recreation Management Plan to Match Final FERC Order Language			\$1,000
3.2	Lloyd Shoals Boat Ramp (former Jane Lofton Public Access Area)	Capital costs are to enhance recreation amenities by constructing a new two-lane boat ramp, a barrier-free fishing pier, barrier-free parking next to the fishing pier, a restroom with a flush toilet, and expanded parking. O&M Costs include Georgia Power personnel to monitor			\$1,100,000

Table D3 Estimated Capital and Annual Operation Expenses for Environmental Measures for 50-year license

Item	Major Category	Components	O&M \$	Total O&M \$ for 50-year license term	Capital \$
		and maintain park.	\$35,000	\$1,750,000	
3.3	Lloyd Shoals Park	Demolish existing boat ramp to and construct a non- motorized boat (canoe/kayak) step-down ramp in its place, replacing the existing courtesy dock with a barrier- free fishing pier, construct barrier-free parking next to the new fishing pier, restripe existing parking areas for vehicle-only spaces, and update the existing restroom and bathhouse. These improvements would enhance access for canoeing, kayaking, and bank fishing, alleviate parking congestion on peak-use weekends, and continue to support quality recreation opportunities. O&M Costs include Georgia Power personnel to monitor and maintain park.	\$35,000	\$1,750,000	\$800,000
		Additional O&M costs are contract personnel responsible for cleaning, trash pick-up, landscaping, and park management.	\$10,000	\$500,000	
3.3	Ocmulgee River Park	Enhance recreation amenities at Ocmulgee River Park by rehabilitating the existing boat ramp, redefining and paving the existing parking area, landscaping with boulders to discourage parking near the shoreline, installing one concrete-lined vault toilet, and relocating picnic tables closer to the existing parking area. O&M Costs include Georgia Power personnel to monitor and maintain park.	\$25,000	\$1,250,000	\$350,000
		Additional O& M costs include contract responsible for cleaning, trash pick-up, landscaping, and park management costs.	\$10,000	\$500,000	

Item	Major Category	Components	O&M \$	Total O&M \$ for 50-year license term	Capital \$
3.3	Tussahaw Creek Public Access Area	Enhance recreational access to Lake Jackson by developing formal access on Georgia Power land at the Highway 36 Bridge at Tussahaw Creek. New amenities would be constructed to include a paved access road off of Winding Way, a paved parking area with 10 parking spaces of which two will be accessible, one picnic table and one trash can, and a paved sidewalk leading to bank fishing areas and a step-down ramp for canoeing/kayaking access.	\$30,000	\$1,500,000	\$500,000
		O&M costs include Georgia Power personnel to monitor and maintain park. Additional O& M costs include contract personnel responsible for cleaning, trash pick-up, landscaping, and	\$10,000	\$500,000	
4	Cultural Resources Educa	park management costs. tion			
4.1		Implement a Historic Properties Management Plan through a Programmatic Agreement to assure the preservation and long-term management of archaeological sites and historic buildings and structures within the project boundary.	\$1,000	\$50,000	\$50,000
5	Shoreline Management				
5.1		Revision of the Shoreline Management Plan in accordance with the existing Shoreline Management Guidelines for Georgia Power Lakes. Implementation of SMP to promote the maintenance of vegetative buffers around the reservoir to protect water quality, aquatic habitat, and cultural and aesthetic resources.	\$10,000	\$500,000	\$1,000
5.2	Maintenance Personnel	One dedicated shoreline specialist responsible for the permitting, compliance, and inspection of shoreline facilities on Lake Jackson	\$75,000	\$3,750,000	
Total	All Environmental Measure	25		\$19,628,000	\$2,823,000



Lloyd Shoals Hydroelectric Project FERC Project Number 2336-094

Exhibit D Appendix A

Privileged Proprietary/Confidential Information Contains Privileged Information-Do Not Release

Prepared by

Southern Company Generation Hydro Services

December 2021

Georgia Power Company Lloyd Shoals Project P-2336 Exhibit D, Appendix A

Contains Privileged Information Do Not Release

Exhibit D, Appendix A contains Documents that include privileged and confidential commercial, financial, and economic information that should not be released in accordance with Federal Energy Regulatory Commission regulations found at 18 C.F.R. § 388.112.

The privileged and confidential information derives economic value from not being generally known to, and not being readily ascertainable by proper means by, other persons who can obtain economic value from their disclosure or use. Additionally, the Documents that contain this privileged and confidential information are subject to extensive efforts by Georgia Power Company (Georgia Power) and Southern Company to maintain their secrecy.

The privileged and confidential information contains pricing information specific to Georgia Power and Southern Company. If revealed to the public, the information would provide valuable insights to the Companies' practices, allowing suppliers and competitors to price products in a manner which would negatively impact the Company's competitive position in a substantial way. This would ultimately cause severe economic harm to Georgia Power and Southern Company and, significantly, their customers. The information is therefore exempt from disclosure pursuant to Section (b)(4) of the Freedom of Information Act, 5 U.S.C. § 552(b)(4).

Only select Georgia Power and Southern Company personnel and their legal counsel are granted access to these Documents that contain privileged and confidential information. Those personnel receive access only on a "need to know" basis. If a party outside Georgia Power and Southern Company and their legal counsel is granted access to the Documents, the party is required to sign a confidentiality agreement with respect to the Documents. Additionally, access to Georgia Power and Southern Company buildings and files is restricted.

See Volume 7 Exhibit D, Appendix A



Lloyd Shoals Hydroelectric Project FERC Project Number 2336-094

Exhibit H

Public

Prepared by

Southern Company Generation Hydro Services

December 2021

18 CFR 5.18(c) Exhibit H. The information required to be provided by this paragraph (c) must be included in the application as a separate exhibit labeled "Exhibit H."

Exhibit H contains written documentation, photos, and tabular data. Exhibit H also has three appendices. The first, titled Exhibit H Appendix A, contains figures and photographs. This material is considered Critical Energy Infrastructure Information (CEII) and must be withheld from public disclosure pursuant to the requirements of 18 CFR 388.113.

The second appendix, titled Exhibit H Appendix B, contains written documentation, figures, and tables. This information is considered commercial and financial information, which is privileged, trade secret, confidential and not for public disclosure. This information is to be withheld from public disclosure pursuant to the requirements of 18 CFR 388.112.

The third appendix, titled Exhibit H Appendix C, contains documentation of temporary deviations from the terms of the license.

Where these pieces of information are referenced in the write up of Exhibit H, the information is referenced as either Exhibit H, Exhibit H Appendix A, Exhibit H Appendix B, or Exhibit H Appendix C.

18 CFR 5.18(c)(1)(i) Information to be supplied by all applicants. All applicants for a new license under this part must file the following information with the Commission:

Georgia Power Company (Georgia Power) holds a Federal Energy Regulatory Commission (the Commission or FERC) license for the Lloyd Shoals Hydroelectric Project (Lloyd Shoals Project, Lloyd Shoals or Project) and is applying for a new license. The following information is supplied in the application as Exhibit H pursuant to the requirements of 18 CFR 5.18.

18 CFR 5.18(c)(1)(i)(A) A discussion of the plans and ability of the applicant to operate and maintain the project in a manner most likely to provide efficient and reliable electric service including efforts and plans to:

Georgia Power is part of one of the largest investor-owned utilities in the nation, the Southern Company. Georgia Power has 14,418 MW of capacity. Georgia Power owns 17 hydro plants and has partial ownership of another. The combined capacity of the Georgia Power hydroelectric stations is 1,105 MW. Georgia Power plans to continue to operate the Lloyd Shoals development in a safe, efficient, and reliable manner, just as it has in the past.

18 CFR 5.18(c)(1)(i)(A)(1) Increase capacity or generation at the project

Georgia Power has no plans at this time to increase capacity or generation at the Project.

18 CFR 5.18(c)(1)(i)(A)(2) Coordinate the operation of the project with any upstream or downstream water resource projects:

There are no substantial reservoirs upstream of the Lloyd Shoals Project. Plant operators monitor stream gages (South River, Honey Creek, Yellow River, Big Haynes, and Alcovy River) upstream of Lake Jackson. The operators use actual flows observed in the basin to make operating decisions. Water is not released in advance of a storm because oftentimes predicted storms do not materialize.

Lake Jackson does not have storage capacity available to support water withdrawals without affecting other FERC licensed resource management goals such as power generation, public recreation access, and minimum/supplemental

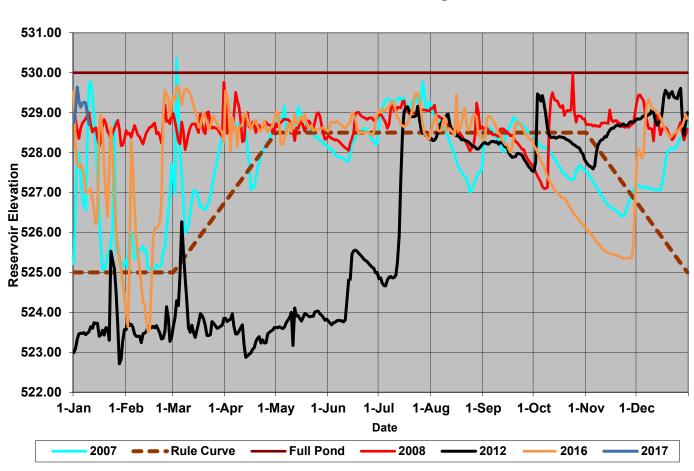
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flows. Figure H1 shows elevation plots of Lake Jackson during the most recent extreme droughts, as discussed further below. During all of these droughts, Lloyd Shoals sustained a 250 cubic feet per second (cfs) supplemental flow for months when inflows were much less, pulling Lake Jackson down significantly.

During relicensing of the Lloyd Shoals Project in the early 1990's studies were conducted on water quality and quantity, fisheries, recreation, and other topics and were conducted in consultation with state and federal natural resources agencies. These studies helped establish the 400 cfs minimum flows to protect water resources of Lake Jackson and downstream in the Ocmulgee River.

During drought, low inflow conditions can persist for several months resulting in sustained periods when the elevation of Lake Jackson is below normal operating range. Yet, Lloyd Shoals Dam releases a continuous flow of 250 cfs into the Ocmulgee River downstream to supplement stream flows for downstream use. The 250 cfs allows for continued operation of the Butts County Water Authority and the Macon Water Authority water supply intakes, which are located on the Ocmulgee River downstream of Lloyd Shoals dam (approximately 1 mile and 40 miles, respectively). When the inflows increase above 250 cfs, the supplemental release is held at 250 cfs long enough for Lake Jackson to refill to normal operating levels. Accordingly, utilization of greater inflows to raise lake elevations provides for future protection of the lake and downstream resources.

Figure H1 below shows Lake Jackson elevation during the most recent drought periods from 2007 through 2020. This plot shows that the lowest daily elevation reached due to drought was 525.34 feet in 2016. Lower elevations were experienced in the first quarters of 2007, 2012 and 2016 due to rule curve adherence (2007) and scheduled drawdowns (2012 and 2016). Over this timeframe Lake Jackson has not reached an elevation critical to the continued passage of minimum flows. A physical constraint to the continued passage of minimum flow exists at the top of the powerhouse intake elevation 506 feet. The intake must remain entirely submerged to avoid damage to the generating units. In the rare event that there are no generating units available to operate, minimum flows can be passed through the trash gate, which has a crest elevation of 518 feet.



Lake Jackson (Lloyd Shoals Dam) Drawdown in Recent Droughts

Figure H1: Lake Jackson Drawdown During Recent Droughts

18 CFR 5.18(c)(1)(i)(A)(3) Coordinate the operation of the project with the applicant's or other electrical systems to minimize the cost of production.

Georgia Power's Transmission Operations organization monitors the operation of Southern Company's transmission system to ensure Southern Company load demand is met. Transmission Operations organization issues a daily generation schedule to the operator at Lloyd Shoals when the plant is manned and with operators at Wallace Dam when Lloyd Shoals is operated remotely. The schedule issued typically coordinates the timing of generation such that the water available for generating units will be utilized during the expected daily peak when customer usage rates are higher. Utilizing hydroelectric fleet during peak periods helps to minimize the cost of energy production because of its no-cost fuel.

18 CFR 5.18(c)(1)(i)(B) A discussion of the need of the applicant over the short and long term for the electricity generated by the project including:

The Lloyd Shoals Project would provide low-cost, carbon-free hydroelectric generation to assist in meeting regional power demand, generation diversity needs, and capacity needs. The Project would have a nameplate capacity of 18 MW and generate approximately 70,600 megawatt-hours (MWH) per year.

The North American Electric Reliability Corporation (NERC) annually forecasts electrical supply and demand nationally and regionally for a 10-year period. The Lloyd Shoals Project is located in the SERC Reliability Corporation (SERC) region of NERC. The SERC region includes all or portions of 16 southeastern and central states. SERC is divided geographically into four assessment areas that are identified as SERC-E, SERC-C, SERC-FP, and SERC-SE. The Lloyd Shoals Project is in assessment area SERC-SE, which covers portions of Georgia, Alabama, Florida, and Mississippi.

NERC's 2020 Long-Term Reliability Assessment (LTRA) shows the projected growth in capacity demand for the period 2021 to 2030. The summer period is typically the heaviest demand period for Southern Company and Georgia Power, although increasingly, winter capacity is needed. The capacity growth trends for the SERC-SE assessment area for the period of 2021 to 2030 for the summer peak season demand show that the SERC-SE region will need to add 14 MW of capacity. Even though this capacity projection is relatively flat, there are changes underway in both NERC's and Georgia Power's bulk power system. NERC's 2020 LTRA shows a planned addition of 9,544 MW of solar in the SERC-SE subregion through 2030, and specifically Georgia Power's 2019 Integrated Resource Plan (IRP) specifies a plan for Georgia Power to procure an additional 1,000 MW of renewable resources, primarily solar. Solar resources are intermittent and need firm generating capacity to deploy in case variable resources are shed due to changes in sun or wind. Hydroelectric capacity provides the firm capacity needed for quick dispatch during both variable resources load shed and for system emergencies.

Georgia Power's 2019 IRP presents the importance of its hydro fleet stating, "The hydro fleet's unique operating characteristics support continued renewable resource integration by compensating for the intermittent nature of renewable generation, specifically wind and solar. These characteristics, such as quick start capability, high ramp rates, and pumped-storage abilities are superior to the capability of other dispatchable resources." Georgia Power's 2019 IRP exhibits its intent to continue to operate the Lloyd Shoals Project for at least another 40 years as a component of its overall strategy to provide customers with reliable and affordable electric service.

NERC's 2020 LTRA is based on information supplied in year 2020 about known system changes, and therefore would have included the generation fleet proposal made by Georgia Power in its 2019 IRP. NERC's 2020 LTRA has deemed the resource capacity and operating reliability of SERC-SE's subregion adequate through 2030, and the need for electricity generated by the Lloyd Shoals Project contributes to the adequacy of the subregion.

Based on the present and future use of the Project's power, its low cost, the future addition of variable energy sources (primarily wind and solar), the retirement of conventional generation, and flexible resources needed to offset variability of wind and solar to maintain operating reliability and provide bulk power system support, Georgia Power concludes that power from the Lloyd Shoals Project will help meet a need for reliable and affordable power in the Southern Company service territory as well as in the SERC-SE region during the short and long term.

18 CFR 5.18(c)(1)(i)(B)(1) The reasonable costs and reasonable availability of alternative sources of power that would be needed by the applicant or its customers, including wholesale customers, if the applicant is not granted a license for the project.

Georgia Power has the obligation to provide electric service to customers in its service territory at just and reasonable rates. Hydroelectric power plays an important part in meeting that obligation. If Georgia Power is not granted a license for the Lloyd Shoals Project, this lost power would need to be replaced. The capacity would be replaced either by purchasing power from the new Lloyd Shoals Project licensee or by constructing new capacity.

Georgia Power would buy power from the entity awarded the Lloyd Shoals Project license, presumably at a price higher than the cost when Georgia Power had the license. The new license holder would profit, but Georgia energy customers would have higher electricity bills. Additionally, there is no guarantee that the license holder would operate the Project in the same way that Georgia Power would have.

Georgia Power has conducted an analysis of an alternative technology that would most likely replace the Lloyd Shoals Project. The alternative technology is Combustion Turbine (CT) units.

Yearly cost breakdowns for each alternative are presented in Table H1, titled Comparison of Replacement Alternative and Lloyd Shoals Hydro Project Cost, in Exhibit H Appendix B.

18 CFR 5.18(c)(1)(i)(B)(2) A discussion of the increase in fuel, capital, and any other costs that would be incurred by the applicant or its customers to purchase or generate power necessary to replace the output of the licensed project, if the applicant is not granted a license for the project.

If Georgia Power simply purchases power from the new Lloyd Shoals Project license holder, no increase in fuel costs would be anticipated. However, the amount spent on outside energy purchases would increase, and customer electricity price increases would presumably result.

Table H2, titled Comparison of Replacement Alternative and Lloyd Shoals Project Costs for 40 years (Thousands of Dollars), and Table H5, titled Comparison of Replacement Alternative and Lloyd Shoals Project Costs for 50 Years (Thousands of Dollars), show the comparison between operating the Lloyd Shoals Project and the alternative CT replacements on an annual basis. This table is in Exhibit H Appendix B.

Table H3, titled Estimated Annual Cost of the Lloyd Shoals Project for 40 years (Incremental Cost Only), and Table H6, titled Estimated Annual Cost of the Lloyd Shoals Project for 50 Years (Incremental Cost Only), are presented in Exhibit H Appendix B and present the detailed breakdown of the estimated annual costs for the Lloyd Shoals Project. These

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tables present the: 1) Cost of Capital [Equity and Debt]; 2) Federal, Local and State Taxes; 3) Depreciation Expenses; 4) Operation and Maintenance Expenses; 5) Fuel Expenses; and 6) Total Expenses.

Table H4, titled Estimated Annual Cost of CT Capacity to Replace the Lloyd Shoals Project for 40 years, and Table H7, titled Estimated Annual Cost of CT Capacity to Replace the Lloyd Shoals Project for 50 Years, present the same elements of the estimated annual costs for a Combustion Turbine unit to replace the Lloyd Shoals Project. These tables are located in Exhibit H Appendix B.

Tables H8 and H9 extract from the above tables the Accumulated Present Value, in thousands of 2024 dollars, for each of the four cost categories mentioned for 40 and 50 years. These tables are titled Table H8, Accumulated Present Value for Cost Categories for Alternatives for 40 Years, and Table H9, Accumulated Present Value for Cost Categories for S0 Years, and are presented in Exhibit H Appendix B.

Tables H8 and H9 demonstrate that Georgia Power has conducted a rigorous analysis of the alternative. The tables show that, a Combustion Turbine unit is approximately 1.5 times as expensive as the existing hydro project.

The alternative technology is dependent on a fuel source and the Lloyd Shoals is not. The fuel cost component for the alternative is the largest single cost component.

18 CFR 5.18(c)(1)(i)(B)(3) The effect of each alternative source of power on;

The effects of alternative sources of power are presented in the following subsections.

18 CFR 5.18(c)(1)(i)(B)(3)(i) The applicant's customers, including wholesale customers;

Georgia Power's customers, including wholesale customers, would experience an increase in electricity prices if power generation were to be replaced by sources other than the Lloyd Shoals Project. Georgia Power would have to construct or purchase more power from other suppliers at an increasingly higher price. The additional cost associated with either of these options would most likely result in an increase in costs to customers. As of December 31, 2020, the average cost of fuel generated by company assets was \$1.96 per KWH and the average cost of fuel of purchased power was \$3.69 per KWH.

18 CFR 5.18(c)(1)(i)(B)(3)(ii) The applicant's operating and load characteristics;

In 2020, Georgia Power had total sales, including off-system sales, of approximately 83.5 billion kilowatt-hours. Within its service territory, which covers most of the state of Georgia, 2020 sales were 80.8 billion kilowatt-hours while serving 2.64 million customers. In 2020, Georgia Power's non-coincident peak demand experienced was 15,831 MW. The loss of the generation capacity from this Project would make it more difficult for Georgia Power to meet peak demands within the system.

The most likely source for alternative power would be constructing combustion turbine (CT) type units. Alternatively, depending upon the availability of spot market capacity in the region and transmission capability to deliver this power to Georgia Power, purchasing electricity might be another alternative solution to meet short-term power needs. However, neither of these resources offers the level of reliability obtained from the Project in terms of affordability and quick availability. Georgia Power's transmission system is interconnected with a large number of power sources making replacement power generally available. Replacement power, however, is dependent on available transmission capacity and is not affordable.

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In addition, if Georgia Power replaced the Project with CT units located in the vicinity of the Lloyd Shoals Project, the voltage stabilization benefits of hydro may have to be supplied in some other way, to prevent negative effects to Georgia Power's operating and load characteristics. CT units cannot provide the continuous voltage stabilization unless they are generating. Georgia Power's hydroelectric units are generally maintained in a motoring status when not loaded, thus serving as synchronous condensers continually regulating system voltage within prescribed limits. If the CT units were to be online and generating (and thereby providing voltage stabilization), they may be running when it would not be economically beneficial to do so.

Furthermore, Georgia Power hydro units contribute to the Southern Balancing Authority's total hydroelectric power capacity by providing a significant portion of spinning and supplemental contingency reserves. This capacity can be immediately called on in case of an unplanned steam plant or nuclear plant shutdown. Spinning reserve must equal the capacity of the largest unit, presently 1,200 MW. Hydro capacity is ideal spinning reserve because it can be fully loaded in one to two minutes in response to demand. Combustion Turbines cannot provide spinning reserve like hydro plants because they typically take 10 to 15 minutes to start up.

18 CFR 5.18(c)(1)(i)(B)(3)(iii) The communities served or to be served, including any reallocation of costs associated with the transfer of a license from the existing licensee.

Hydroelectric projects by nature have high capital costs (per installed kW) and a long life and slow payback. For long life generating assets, most of the benefit is derived at the end of the life cycle. The Project is considered to be mid-life cycle. Granting a license to another party other than Georgia Power would deprive its investors and customers of end-of-life cycle benefits. Additionally, the Project facilities and staff provide many benefits to the community in addition to low-cost power. Georgia Power is an important part of the local community.

18 CFR 5.18(c)(1)(i)(C) The following data showing need and the reasonable cost and availability of alternative sources of power;

The data on the need and reasonable cost of alternative sources of power is presented in the following sections.

18 CFR 5.18(c)(1)(i)(C)(1) The average annual cost of the power produced by the project, including the basis for that calculation;

The requested information is presented in Exhibit H Appendix B in the section titled Written Documentation, in the subsection titled Annual Cost of Power Produced by the Project.

18 CFR 5.18(c)(1)(i)(C)(2) The projected resources required by the applicant to meet the applicant's capacity and energy requirements over the short and long-term including:

This section describes projected resources required by Georgia Power to meet its future capacity and energy requirements.

18 CFR 5.18(c)(1)(i)(C)(2)(i) Energy and capacity resources including contributions from the applicant's generation, purchases, and load modification measures (such as conservation, if considered as a resource), as separate components of the total resources required;

Figure H2, titled Load and Capability Comparison Georgia Power Company All Capacity and Table H10, titled Load and Capacity Comparison (MW) All Capacity, illustrate Georgia Power's projected capacity requirements from 2024 to 2034. Both Figure H2 and Table H10 are presented in Exhibit H Appendix B. Figure H2 is based on the data in Table H10 for the categories of Net Peak Load and Total Capability.

18 CFR 5.18(c)(1)(i)(C)(2)(ii) A resource analysis, including a statement of system reserve margins to be maintained for energy and capacity; and

Based on the installed capacity that is owned by Georgia Power as of 12/31/2020, Georgia Power's total hydro capacity is approximately 1,105 MW. Assuming no loss of existing hydro projects, hydro capacity will continue to be about 5.6% of Georgia Power's capacity total. The capacity total is based on the generation sources of fossil steam, nuclear steam, combustion turbine, combined cycle, co-generation, hydroelectric and renewable units.

Figure H3, titled Capacity Distribution By Type Georgia Power Company Percent of Total Capacity, is based on the data supplied in Table H11, titled Capacity Distribution By Type Georgia Power Company Percent of Total Capacity. The data shows the distribution of sources of generation, or the capacity mix, between 2024 and 2034.

Figure H4, titled Capacity Distribution By Type Georgia Power Company Percent of Total Energy is based on the data supplied in Table H12, titled Capacity Distribution By Type Georgia Power Company Percent of Total Energy and is presented in Exhibit H Appendix B. This data shows the distribution of sources of energy, or the energy mix between 2024 and 2034.

The requested information is presented in Exhibit H Appendix B in the section titled Written Documentation, in the subsection titled Resource Analysis.

18 CFR 5.18(c)(1)(i)(C)(2)(iii) If load management measures are not viewed as resources, the effects of such measures on the projected capacity and energy requirements indicated separately;

Load management is viewed by Georgia Power as a resource. This was discussed in section 18 CFR 5.18(c)(1)(i)(C)(2)(i). Figure H3, titled Capacity Distribution By Type Georgia Power Company Percent of Total Capacity (which is based on the data supplied in Table H11, titled Capacity Distribution By Type Georgia Power Company Percent of Total Capacity), shows the Dispatchable Demand Side Options (DSO) as a percentage of the total capacity mix. The DSO values are rolled up to be reflected in the values of Net Peak Load in Table H10. These values are then reflected in the data presented in Figure H2, titled Load and Capability Comparison Georgia Power Company All Capacity.

18 CFR 5.18(c)(1)(i)(C)(2)(iv) For alternative sources of power, including generation of additional power at existing facilities, restarting deactivated units, the purchase of power off-system, the construction or purchase and operation of a new power plant, and load management measures such as conservation: The total annual cost of each alternative source of power to replace project power; the basis for the determination of projected annual costs; and a discussion of the relative merits of each alternative including the issues of the period of availability and dependability of purchased power, average life of alternatives, relative equivalent availability of generating alternatives, and relative impacts on the applicant's power system reliability and other system operating characteristics; and the effect on the direct providers (and their immediate customers) of alternate sources of power.

Georgia Power has conducted an analysis of an alternative technology available that would be most likely to replace the Lloyd Shoals Project. The most likely alternative technology is Combustion Turbine (CT) units. Yearly cost breakdowns for the alternative are presented in Table H1, titled Comparison of Replacement Alternative and Lloyd Shoals Hydro Project Costs.

As discussed in section 18 CFR 5.18(c)(1)(i)(C)(2)(i), Georgia Power employs load management measures to help shape its load curve to reduce the capacity demand. However, load management will not be able to replace the benefits that the hydro station brings to the system, as discussed in section 18 CFR 5.18(c)(1)(i)(B)(3)(ii).

Replacement of the Lloyd Shoals Project energy by generation of additional power at existing units is not the most economical method of supplying the energy. The other sources of power would involve generation from more expensive sources of capacity.

There are no deactivated Georgia Power units that could be reactivated to replace the Lloyd Shoals Project.

Purchase of power off-system to replace the Lloyd Shoals Project power could only be a temporary solution. Georgia Power does buy power off-system when it is economically advantageous to do so. However, over the long term, Georgia Power does not plan to depend on off-system power purchases for its power needs.

Regarding the basis for the determination of projected annual costs, the cost of capital figures reflects Allowance for Funds Used During Construction (AFUDC), and all capital production modifications are assumed to be fully depreciated over the license period. The operation and maintenance figures include interim replacements, property insurance, cash working capital, payroll taxes, and fuel inventory carrying charges, as appropriate. Fuel and purchased power costs reflect a mixture of coal, gas, and oil purchases required to offset the energy produced by the Lloyd Shoals. Also included are the costs associated with lost benefits in the Southern Company Intercompany Interchange Contract (IIC).

The alternative generation source has its own relative merits. Table H13, titled Characteristics of Alternative Generation Lloyd Shoals Hydro Project, presents the expected life, equivalent forced outage rate, and availability for the alternatives of the Lloyd Shoals Project and Combustion Turbine units.

The requested information is presented in Exhibit H Appendix B in the section titled Written Documentation, in the subsection titled Alternatives Costs and Availability.

A summary of the total costs to Georgia Power's customers for replacement of the Lloyd Shoals Project with an equivalent amount of power from the alternative is presented in Table H1, titled Comparison of Replacement Alternative and Lloyd Shoals Hydro Project Cost, and Table H6, titled Comparison of Replacement Alternative and Lloyd Shoals Hydro Project Cost (Incremental Cost Only).

18 CFR 5.18(c)(1)(i)(D) If an applicant uses power for its own industrial facility and related operations, the effect of obtaining or losing electricity from the project on the operation and efficiency of such facility or related operations, its workers, and the related community.

Georgia Power does not use the electricity generated at the Project for any particular industrial facility. Therefore, this section is not applicable.

18 CFR 5.18(c)(1)(i)(E) If an applicant is an Indian tribe applying for a license for a project located on the tribal reservation, a statement of the need of such Indian tribe for electricity generated by the project to foster the purposes of the reservation.

Georgia Power is an investor-owned utility. Therefore, this section is not applicable.

18 CFR 5.18(c)(1)(i)(F) A comparison of the impact on the operations and planning of the applicant's transmission system of receiving or not receiving the project license, including:

18 CFR 5.18(c)(1)(i)(F)(1) An analysis of the effects of any resulting redistribution of power flows online loading (with respect to applicable thermal, voltage, or stability limits), line losses, and necessary new construction of transmission facilities or upgrading of existing facilities, together with the cost impact of these effects;

The Lloyd Shoals Project located in central Georgia provides essential loading and voltage support of the transmission system extending south to Northern Macon, North to Griffin and East to Porterdale areas. When the plant's generators are not in use to produce power, they are typically "motoring". While motoring the generators provide reactive power (MVAR) support for voltage regulation of the transmission system connecting these areas. Motoring also provides the generators the ability to move from zero-megawatt output to full load very quickly, 2-3 minutes, typically. During transmission disturbances this is an essential stability tool in prevention of cascading transmission events and widespread power outages and aids in public safety.

Following a real-time voltage schedule, Lloyd Shoals is Georgia Power's first line transmission system support for voltage regulation in the local area. Georgia Power has a contingency plan for voltage support, however, for the reliability of the transmission system redundancy is important. Loss of Lloyd Shoals would impact outage planning and transmission planners would need to determine need for replacement sources of reactive power. The transmission

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system would lose reserve capacity equal to the capacity of the plant. The Lloyd Shoals substation would remain in place to sustain its current interconnection and switching functions.

The size of the plant does not have a significant impact on local or regional transmission system's thermal conditions.

18 CFR 5.18(c)(1)(i)(F)(2) An analysis of the advantages that the applicant's transmission system would provide in the distribution of the project's power; and

Georgia Power's transmission system is an integral part of the bulk electric system in the Southeastern Electric Reliability Council territory, and supplies power to a large portion of the Southern Balancing Authority area. If the applicant is granted a new license for this Project, the power from the Project will continue to flow through this system to provide low-cost power to the system's customers. In the event Georgia Power is not granted a new license to operate Lloyd Shoals, the transmission system could continue to provide transmission of the Project's power, provided that the new licensee is willing to operate the Project consistent with the needs of the transmission system.

18 CFR 5.18(c)(1)(i)(F)(3) Detailed single-line diagrams, including existing system facilities identified by name and circuit number, that show system transmission elements in relation to the project and other principal interconnected system elements. Power flow and loss data that represent system operating conditions may be appended if applicants believe such data would be useful to show that the operating impacts described would be beneficial.

Lloyd Shoals Hydro and Lloyd Shoals substations are project-owned and within the project boundary, located on the western abutment of the powerhouse and earthen dam. Housed in adjacent cable trays, two 2.3-kilovolt project generator leads exit the western side of the powerhouse and extend up the bank to the Lloyd Shoals Hydro substation. Inside the Lloyd Shoals Hydro substation are two three-phase, outdoor, step-up transformers positioned approximately 25 ft apart. The approximate length of the generator lead that connects to the northern-most transformer is 250 ft from where it exits the powerhouse to where it is connected to the transformer. The approximate length of the generator lead that connects to the southern-most transformer is 230 ft from where it exits the powerhouse to where it is connected to the transformer. Inside Lloyd Shoals Hydro substation, two step-up transformers, rated 10/12-megavoltampere (MVA) and 10-MVA, receive 2.3 kV power from the generator leads and send 12kV power to a multi-wound transformer. The multi-wound transformer sends power to the immediately adjacent Lloyd Shoals substation, where power is stepped up and connected to the primary transmission system via existing 69kV and 115kV transmission lines. Figure H5, titled Single Line Drawing of Georgia Integrated Transmission System Lloyd Shoals Hydro Substation, provides a single-line drawing depicting the transfer of electricity from the Lloyd Shoals Project to the transmission grid within the substation. Figure H6, titled Single Line Drawing of Georgia Integrated Transmission System Lloyd Shoals Substation, provides a single line drawing of the Lloyd Shoals substation. Since transmission lines are CEII, Figure H5 and Figure H6 are in Exhibit H, Appendix A.

18 CFR5.18(c)(1)(i)(G) If the applicant has plans to modify existing project facilities or operations, a statement of the need for, or usefulness of, the modifications, including at least a reconnaissance-level study of the effect and projected costs of the proposed plans and any alternate plans, which in conjunction with other developments in the area would conform with a comprehensive plan for improving or developing the waterway and for other beneficial public uses as defined in section 10(a)(1) of the Federal Power Act.

Georgia Power has no plans at this time to modify the existing project facilities or operations.

18 CFR5.18(c)(1)(i)(H) If the applicant has no plans to modify existing project facilities or operations, at least a reconnaissance-level study to show that the project facilities or operations in conjunction with other developments

in the area would conform with a comprehensive plan for improving or developing the waterway and for other beneficial public uses as defined in section 10(a)(1) of the Federal Power Act.

Georgia Power has no plans at this time to modify the existing project facilities or operations.

Section 10(a)(2)(A) of the FPA, 16 U.S.C. § 803(a)(2)(A), requires the Commission to consider the extent to which a project is consistent with Federal or State comprehensive plans for improving, developing, or conserving a waterway or waterways affected by the Project. FERC (2021) currently lists 41 comprehensive plans for the state of Georgia. Of those plans, 23 are potentially relevant to the Lloyd Shoals Project. Section 3.3.6 of Exhibit E of this license application provides a description of the most recent and directly relevant comprehensive plans. Based on a review of the agency and public comments filed on the Project, and on an independent analysis pursuant to Sections 4(e), 10(a)(1), and 10(a)(2) of the FPA, Commission staff will determine whether the issuance of a new license for the Lloyd Shoals Project, with the recommended enhancement measures, would permit the best comprehensive development of the Ocmulgee River.

The 23 plans identified as potentially relevant to the Project are as follows:

Atlantic States Marine Fisheries Commission. 1998. Amendment 1 to the Interstate Fishery Management Plan for Atlantic sturgeon (*Acipenser oxyrhynchus oxyrhynchus*). (Report No. 31). July 1998.

Atlantic States Marine Fisheries Commission. 1998. Interstate fishery management plan for Atlantic striped bass. (Report No. 34). January 1998.

Atlantic States Marine Fisheries Commission. 1999. Amendment 1 to the Interstate Fishery Management Plan for shad and river herring. (Report No. 35). April 1999.

Atlantic States Marine Fisheries Commission. 2000. Technical Addendum 1 to Amendment 1 of the Interstate Fishery Management Plan for shad and river herring. February 9, 2000.

Atlantic States Marine Fisheries Commission. 2009. Amendment 2 to the Interstate Fishery Management Plan for shad and river herring, Arlington, Virginia. May 2009.

Atlantic States Marine Fisheries Commission. 2010. Amendment 3 to the Interstate Fishery Management Plan for shad and river herring, Arlington, Virginia. February 2010.

Atlantic States Marine Fisheries Commission. 2000. Interstate Fishery Management Plan for American eel (*Anguilla rostrata*). (Report No. 36). April 2000.

Atlantic States Marine Fisheries Commission. 2008. Amendment 2 to the Interstate Fishery Management Plan for American eel. Arlington, Virginia. October 2008.

Atlantic States Marine Fisheries Commission. 2013. Amendment 3 to the Interstate Fishery Management Plan for American eel. Arlington, Virginia. August 2013.

Atlantic States Marine Fisheries Commission. 2014. Amendment 4 to the Interstate Fishery Management Plan for American eel. Arlington, Virginia. October 2014.

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Department of the Army, Corps of Engineers. Savannah District. 1985. South metropolitan Atlanta region: Georgia water resources management study. Savannah, Georgia. January 1985.

Department of the Army, Corps of Engineers. Savannah District. 1985. Water resources development by the U.S. Army Corps of Engineers in Georgia. Savannah, Georgia. January 1985.

Georgia Department of Natural Resources. 1985. Water availability and use - Ocmulgee River Basin. Atlanta, Georgia.

Georgia Department of Natural Resources. 1986. Water availability and use report - Altamaha River Basin. Atlanta

Georgia Department of Natural Resources. 2008. Georgia Statewide Comprehensive Outdoor Recreation Plan (SCORP): 2008-2013. Atlanta

Metropolitan North Georgia Water Planning District. 2003. Water supply and water conservation management plan. Atlanta, Georgia. September 2003.

Metropolitan North Georgia Water Planning District. 2003. Long-term wastewater management plan. Atlanta, Georgia. September 2003.

Metropolitan North Georgia Water Planning District. 2003. District-wide watershed management plan. Atlanta, Georgia. September 2003.

National Marine Fisheries Service. 1998. Final Recovery Plan for the shortnose sturgeon (*Acipenser brevirostrum*). Prepared by the Shortnose Sturgeon Recovery Team for the National Marine Fisheries Service, Silver Spring, Maryland. December 1998.

National Park Service. The Nationwide Rivers Inventory. Department of the Interior, Washington, D.C. 1993.

State of Georgia. Office of the Governor. 1987. Water resources management strategy-summary document. Atlanta, Georgia. January 12, 1987.

U.S. Fish and Wildlife Service. National Marine Fisheries Service. Georgia Department of Natural Resources. 2013. Priority restoration and management actions for the American Shad in the Altamaha River Basin, Georgia. Athens, Georgia. 2013.

U.S. Fish and Wildlife Service. No date. Fisheries USA: the recreational fisheries policy of the U.S. Fish and Wildlife Service. Washington, D.C.

18 CFR 5.18(c)(1)(i)(I) A statement describing the applicant's financial and personnel resources to meet its obligations under a new license, including specific information to demonstrate that the applicant's personnel are adequate in number and training to operate and maintain the project in accordance with the provisions of the license.

Financial Resources

The Southern Company is a holding company headquartered in Atlanta, Georgia that owns three traditional electric operating companies, as well as Southern Power, Southern Company Gas, and other direct and indirect subsidiaries.

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Southern Company's reportable segments are the sale of electricity by the traditional electric operating companies, the sale of electricity in the competitive wholesale market by Southern Power, and the sale of natural gas and other complementary products and services by Southern Company Gas. Southern Company's subsidiaries provide electrical and gas services directly to approximately 8.63 million customers.

As of 12/31/2020, subsidiary companies of the Southern Company owned and or operated 30 hydroelectric generating stations, 24 fossil fuel generating stations, three nuclear generating stations, 13 combined cycle/cogeneration stations, 44 solar facilities, 13 wind facilities, one fuel cell facility, and one battery storage facility. These stations had a combined name plate capacity of 42,548,367 KW.

The three traditional electric operating companies, Georgia Power, Alabama Power and Mississippi Power, operate generating plants serving 4.3 million retail customers in a 116,000 square-mile service territory comprising most of the states of Alabama and Georgia, together with southeastern Mississippi.

Georgia Power is an investor owned, tax-paying, public utility headquartered in Atlanta, Georgia. Georgia Power operates as a vertically integrated utility providing electric service to retail customers within its service area in the State of Georgia and to wholesale customers in the Southeast. Georgia Power is the largest of Southern Company's three traditional subsidiary electric utilities as measured by installed capacity. It has a generation fleet totaling 14,413,456 KW installed capacity with the hydro fleet representing 1,099,882 KW. Georgia Power employs approximately 6,700 workers and has a total of 2,635,000 customers. The following table presents a breakdown of these customers by classes:

Customer Class	Number
Residential	2,296,000
Commercial	319,000
Industrial	11,000
Other	10,000
Total	2,635,000

As of December 31, 2020, Georgia Power's total assets were valued at \$47,080 million and a liabilities and stockholder's equity also totaled \$47,080 million. Operating revenues for 2020 were \$8,309 million. Total operating expenses were \$6,337 million. Net cash provided from operating activities totaled \$2,784 million. Cash and cash equivalents at the end of 2020 totaled \$9 million. As of December 31, 2020, Georgia Power's balance of net income, common stock, paid-in capital, other comprehensive income after cash dividends on common stock was \$16,501 million. In 2020, Georgia Power's retail return on equity (ROE) was within an allowable 9.5% to 12% range.

Operating Revenues	Category	Amount (In Millions)
	Residential	\$3,476
	Commercial	\$2,933
	Industrial	\$1,197
	Other	\$60
	Wholesale – PPA energy revenues	\$42
	Wholesale – PPA capacity	\$450
	revenues	
	Non-PPA Revenues	\$10
	Other Revenues	447
	Other Revenue Sources	94
Total		\$8,309

The following presents a summary of operating revenues and operating expenses as of December 31, 2020.

Operating Expenses	Category	Amount (in Millions)
	Fuel	\$1,141
	Purchased Power – Non-affiliates	\$540
	Purchased Power – Affiliates	\$509
	Other Operations and	\$1,953
	Maintenance	
	Depreciation and Amortization	\$1,425
	Taxes Other Than Income Taxes	\$444
	Income Taxes	\$152
	Estimated loss on Plant Vogtle	\$325
	Units 3 and 4	

Outside independent auditors concluded that Georgia Power's financial condition remained stable as of December 31, 2020. Georgia Power plans to finance future cash needs from operating cash flows, external securities issuances, borrowings from financial institutions, equity contributions from Southern Company, and borrowings through the Federal Financing Bank (FFB). As of December 31, 2020, Georgia Power had \$1,728 million in unused committed credit arrangements with banks. Georgia Power makes short term borrowings primarily through commercial paper programs that have the liquidity support of the committed bank credit arrangement.

Personnel Resources

The following table presents the staffing levels and levels of experience of personnel at the site through a projected date of 12/31/2021.

	Number of	Maximum Years of	Average Years of	Minimum Years of	Total Man Years for
Classification	Personnel	Service	Service	Service	Classification
Electrician	1	45	45	45	45
GPO II*	5	42	25	16	127
Maintenance Specialist	1	41	41	41	41
Mechanic	3	47	44	41	132
Operator A	6	37	21	14	125
Plant Manager	1	45	45	45	45
Power Generation Rep Sr	1	32	32	32	32
Sr Instrument Tech	2	36	26	16	52
Sr Storekeeper	1	42	42	42	42
Superintendent	2	34	33	32	67

*A General Plant Operator is qualified as an operator, mechanic, and electrician.

18 CFR 5.18(c)(1)(i)(J) If an applicant proposes to expand the project to encompass additional lands, a statement that the applicant has notified, by certified mail, property owners on the additional lands to be encompassed by the project and governmental agencies and subdivisions likely to be interested in or affected by the proposed expansion.

Georgia Power is planning to add a small parcel of land to the Project to encompass a new bank fishing site. Georgia Power is the owner of the property, so a property owner notification is not applicable. The proposed expansion was included as a Figure in Georgia Power's preliminary licensing proposal and made available for review and comment by governmental agencies and other interested members of the public. The additional land is also shown in Exhibit G on Sheet 6of this license application.

18 CFR 5.18(c)(1)(i)(K) The applicant's electricity consumption efficiency improvement program, as defined under section 10(a)(2)(C) of the Federal Power Act including:

The following demand side management (DSM) programs and initiatives are offered to qualifying Georgia Power customers to encourage demand reduction and energy conservation and efficiency.

Residential Specialty Lighting Program

Georgia Power's Residential Specialty Lighting Program promotes the purchase and installation of energy-efficient lighting products by Georgia Power residential customers. The program focuses on increasing customer awareness of the benefits of energy-efficient lighting technologies for their home through customer education, retail partnerships, and sales staff training. The program focuses on an LED mark-down campaign for participating retail partners that reduces the retail price for customers at the point of purchase, and the opportunity for customers to purchase discounted LEDs through Georgia Power's Marketplace website.

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Residential Home Energy Improvement Program

Georgia Power's Home Energy Improvement Program ("HEIP") promotes energy efficiency improvements in existing homes and provides financial incentives for implementing eligible energy efficiency measures in homes. The program provides customers, remodelers, and property owners with multiple participation options, including a comprehensive, whole-house approach and an individual improvement option to appeal to a wide range of residential customers. In addition to the financial incentives offered, the program includes customer education and awareness campaigns, and contractor relationships and training.

Residential Refrigerator Recycling Program

Georgia Power's Refrigerator Recycling Program aims to eliminate inefficient, extraneous, secondary, working refrigerators and freezers in an environmentally-safe manner and produce cost-effective, long-term energy and peak demand savings in the single-family market of the residential sector. The program focuses on increasing customer awareness of the economic and environmental costs associated with running inefficient, older appliances in a household, and provides eligible customers with free refrigerator and freezer pick-up services in addition to a monetary incentive.

Residential Income-Qualified (Crowd Funding) Program

Georgia Power's Income-Qualified (Crowd Funding) program promotes energy efficiency improvements in existing Income-Qualified single-family homes, as well as multifamily properties. The program provides members of community who opt-in with access to a centralized web portal where they can learn about opportunities to help raise funds for a neighbor in need of home weatherization assistance or home energy efficiency improvements. These funds will be additive to the funding provided by Georgia Power as part of the DSM tariff. Georgia Power will work with community partners and local nonprofits to identify, assess, and implement projects. In addition to the energy efficiency improvements offered, the program includes customer education and awareness campaigns, and contractor partnerships and training.

Residential Thermostat Demand Response Program

The Residential Thermostat Demand Response program promotes energy efficiency improvements and shifting of electricity usage during peak demand periods. The program provides customers with either the installation of a free, bi-directional communicating smart thermostat, or provides financial incentives for customers with an existing smart thermostat that are willing to help reduce energy during periods of peak demand. This could include hot summer days, cold winter days, or whenever there is a system capacity need. Georgia Power can manage the load from participants' heat pumps, by either adjusting thermostat settings or cycling compressor run times. Demand response programs, in general, help Georgia Power minimize the use of higher cost peaking plants during periods of high system loads. In addition to the incentives offered, the program includes customer education and awareness campaigns.

Residential Behavioral Program

Georgia Power's Residential Behavioral Program is designed to encourage customer engagement with home energy management and energy efficiency in order to reduce energy consumption. The program provides customer-specific information that allows customers to compare their energy use for the month, as well as the past year, to the consumption of a peer group of similar homes and ones that are considered energy-efficient. Participating customers receive a Home Electric Report ("HER") electronically several times a year with a summary of their energy consumption data and consumption over the same time period by their peers. The reports also include seasonal and household-appropriate energy savings tips, as well as information on energy efficiency programs.

Power Credit Program

The Power Credit program allows the Company to cycle HVAC systems (air conditioners or heat pumps) during periods of high system loads and high energy costs during the summer season. HVAC load is shifted into off-peak periods that typically have lower demand and energy costs. In addition to the incentives offered, the program includes customer education and awareness campaigns.

Commercial Custom Program

Georgia Power's Commercial Custom Program ("Custom Program") provides a platform for comprehensive energy efficiency projects in larger existing and new facilities that go beyond single measures and common, measure-level efficiency practices. The Custom Program provides incentives for efficiency improvements not included in other Georgia Power program offerings. All program incentives are based on the verified energy savings achieved for each project. The program does not define a specific list of eligible measures but bases participation on the verifiable energy savings resulting from the measures or system improvements implemented. Due to the complexity and variety of measures included, Georgia Power's Commercial Custom Program typically requires more effort and precision in the calculation and verification of energy savings than the other Commercial programs.

Commercial Prescriptive Program

Georgia Power's Commercial Prescriptive Program ("Prescriptive Program") promotes the purchase of eligible highefficiency equipment installed at qualifying customer facilities. Rebates offered through this program serve to reduce the incremental cost to upgrade to high-efficiency equipment over standard efficiency options for Georgia Power's commercial-class customers. The program includes equipment with easily calculated savings, provides straightforward and easy participation for customers, and allows for reduced EM&V costs.

Commercial Midstream Products Program

Georgia Power's Commercial Midstream Products Program promotes the installation of eligible high-efficiency HVAC and commercial food service equipment at qualifying Georgia Power commercial customer facilities. The program is focused on influencing distributors' stocking practices as well as their promotion and sales of high efficiency HVAC and food service equipment.

Small Commercial Direct Install Program

Georgia Power's Small Commercial Direct Install ("SCDI") Program promotes the installation of eligible high-efficiency equipment at qualifying customer facilities. A primary objective is to develop a process and capability that ensures that qualifying small commercial customers receive the assistance (informational or financial) they require to make cost-effective decisions to install energy-efficient measures.

Commercial Behavioral Program

Georgia Power's Commercial Behavioral program is designed to encourage customer engagement with facility energy management and energy efficiency in order to reduce energy consumption. The program provides customer-specific information that allows customers to compare their energy use for the month, and over the past year, to the consumption of a peer group of similar facilities and facilities that are considered energy-efficient. Participating customers receive a Business Electric Report ("BER") electronically several times a year with a summary of their energy consumption data and consumption over the same time period by their peers. The reports also include seasonal and facility-appropriate energy savings tips, as well as information on energy efficiency programs.

18 CFR 5.18(c)(1)(i)(K)(1) A statement of the applicant's record of encouraging or assisting its customers to conserve electricity and a description of its plans and capabilities for promoting electricity conservation by its customers; and

Georgia Power utilizes the following marketing and outreach channels to relay marketing messages for residential DSM programs: in-store advertising at retail locations; energy efficiency kits, customer emails, web-based advertising, customer newsletters, program brochures/flyers/fact sheets, social media marketing, customer bill inserts, targeted direct-mail campaigns and promotions, community events, door hangers, newspaper, radio and television advertisements, online or in-home energy audits, participating contractor promotions, co-branding at point of purchase, cross-program promotions, national campaigns such as Earth Day and local campaigns such as state Sales Tax

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Holiday, classroom education programs or Parent Teacher Student Association events, one-on-one facilitation from call center referrals, and cooperative marketing through Trade Allies.

Georgia Power utilizes the following marketing and outreach channels to relay marketing messages for commercial DSM programs: customer-oriented marketing materials, email and phone, periodic training sessions, assistance in determining customer eligibility, qualifying equipment, and available incentives, outreach efforts between trade allies and customers and updates to program material such as application and program manuals, web-based advertising, customer newsletters, program brochures/flyers/fact sheets/case studies, direct-mail campaigns, cooperative marketing through trade allies, trade shows, one-on-one facilitation, and customer bill inserts.

18 CFR 5.18(c)(1)(i)(K)(2) A statement describing the compliance of the applicant's energy conservation programs with any applicable regulatory requirements.

Georgia Power's DSM programs were proposed in Georgia Power's 2019 Integrated Resource Plan (2019 IRP), filed with the Georgia Public Service Commission (PSC) (Docket No 40161) on January 31, 2019, and approved in a Georgia PSC Order Adopting Stipulations on July 29, 2019. The IRP details not only Georgia Power's 20-year energy demand projection, but also what resources Georgia Power has, or plans to use, to meet the demand. Conservation methods such as Demand Side Management (DSM) programs are viewed by Georgia Power as resources to meet the projected demands.

The Company's current DSM portfolio consists of demand response programs, energy efficiency programs, pricing tariffs, and other activities. The Company projects that by 2022 these programs will reduce peak demand by approximately 1,600 MW. This load reduction represents 10% of the Company's load in 2019, when the current IRP was filed with the PSC.

A new IRP is filed with the Georgia PSC every three years pursuant to laws in Georgia Code Title 46. The next IRP is expected to be filed in January 2022.

18 CFR 5.18(c)(1)(i)(L) The names and mailing addresses of every Indian tribe with land on which any part of the proposed project would be located or which the applicant reasonably believes would otherwise be affected by the proposed project.

FERC initiated contacts with various tribal representatives on March 1, 2018. The FERC contacted the following Tribes to gage their interest in the proceeding: 1) Muscogee (Creek) Nation 2) Alabama-Quassarte Tribal Town, 3) Alabama-Coushatta Tribe of Texas, 4) Coushatta Tribe of Louisiana, 5) Kialegee Tribal Town, 6) Thlopthlocco Tribal Town, 7) Poarch Band of Creek Indians. None of these entities are known to have any lands in the Project and Georgia Power is not aware of any potential impacts to tribal resources that would occur as a result of the proposed continued operation of the Lloyd Shoals Project. The names and the contacts of the Tribes Georgia Power consulted with are below.

Number	Tribe	Contact Person	Address
1	Alabama-Quassarte Tribal	Wilson Yargee, Chief	P.O. Box 187
	Town		Wetumka, OK 74883
2	Alabama-Coushatta Tribe of	Nita Battise,	571 State Park Rd. 56
	Texas	Chairperson	Livingston, TX 77351
3	Coushatta Tribe of Louisiana	Jonathan Cernek,	P.O. Box 818
		Chairman	Elton, LA 70532
4	Muscogee (Creek) Nation of	David Hill, Chief	P.O. Box 580
	Oklahoma		Okmulgee, OK 74447
5	Muscogee (Creek)	LeeAnne Wendt,	P.O. Box 580
	Nation of Oklahoma	Tribal Archeologist	Okmulgee, OK 74447
6	Muscogee (Creek) Nation of	Raelynn Butler,	P.O. Box 580
	Oklahoma	Manager	Okmulgee, OK 74447
7	Muscogee (Creek) Nation of	Corine Lowe-Zepata,	P.O. Box 580
	Oklahoma	ТНРО	Okmulgee, OK 74447
8	Muscogee (Creek) Nation of	Turner Hunt, Tribal	P.O. Box 580
	Oklahoma	Archeologist	Okmulgee, OK 74447
9	Poarch Band of Creek Indians	Stephanie Bryan,	5811 Jack Springs Road,
		Chairwoman	Atmore, AL 36502
10	Kialegee Tribal Town	Brian Givens, Town	P.O. Box 332
		King	Wetumka, OK 74883
11	Thlopthlocco Tribal Town	Ryan Morrow, Town	P.O. Box 188
		King	Miami, OK 74355

18 CFR 5.18(c)(1)(ii) Information to be provided by an applicant licensee. An existing licensee that applies for a new license must provide:

Georgia Power is the existing licensee and is applying for a new license.

18 CFR 5.18(c)(1)(ii)(A) The information specified in paragraph (c)(1).

The requested information has been provided in the preceding sections.

18 CFR 5.18(c)(1)(ii)(B) A statement of measures taken or planned by the licensee to ensure safe management, operation, and maintenance of the project, including:

Georgia Power has been and continues to be committed to the safe management, operation, and maintenance of the Lloyd Shoals Project. Details supporting this statement are contained in the following sections.

18 CFR 5.18(c)(1)(ii)(B)(1) A description of existing and planned operation of the project during flood conditions;

As previously mentioned, the Lloyd Shoals Project is operated as a modified run-of-river project and Lake Jackson is typically maintained close to full, consistent with supplying minimum flows downstream. Lake Jackson is not capable of storing flood water. During high inflow conditions, flows released from the reservoir emulate natural flows in the river and the plant is operated as run-of-river to fully utilize inflow and to conserve other sources of generating means within Georgia Power's fleet.

During high inflow conditions, the operators would be monitoring upstream river gages. Depending on the gage readings and reservoir elevation, they would also be loading their turbine units until all available units were at 100% gate position. The powerhouse is capable of 3,720 cfs, the hydraulic capacity of the turbines. If the reservoir elevation were to increase, the operator would pass more water by opening the trash gate, which has a capacity of 2,130 cfs. If, after opening the trash gate, the water level in the reservoir continues to rise, Obermeyer spillway gates would be opened. The capacity of the spillway at 530 feet PD is 16,800 cfs. Once inflows exceed the combined capacity of generating units, trash gate and spillway gates (22,530 cfs), Lake Jackson will begin to rise above normal full pool elevation.

Georgia Power coordinates high inflow operations in accordance with the Lloyd Shoals Hydroelectric Project Emergency Action Plan (EAP), which is updated every five years in coordination with FERC's Atlanta Regional Office. In accordance with the EAP, a "High Flow Event" declaration will occur when inflows exceed 30,200 cfs. This flow is indicative of a bank full condition downstream with a stage elevation of 16 feet at the downstream Ocmulgee River at the Jackson, GA gage. When this occurs Lloyd Shoals has activated all generating units, Obermeyer spillway gates are fully opened, and Lake Jackson is above normal full pool around an elevation of 530.2 feet. Georgia Power provides notifications to the National Weather Service (NWS), and the NWS has the responsibility for issuing flood watches or flood warnings. During high water events, plant personnel essentially operate the station as they normally would. The only additional actions they take are the opening of the spillway gates and performing notifications if circumstances require it. As inflows recede, generating units and Obermeyer gates will continue to operate at full capacity until Lake Jackson is within its normal operating range. Obermeyer gates will be closed incrementally until inflows are at or below the hydraulic capacity of the generating units.

18 CFR 5.18(c)(1)(ii)(B)(2) A discussion of any warning devices used to ensure downstream public safety;

Georgia Power has a set of measures that are used to protect the public from hazards at, or from, the station. These measures include protecting members of the upstream public from downstream hazards, as well as protecting members of the downstream public from upstream hazards.

The measures include both physical and programmatic elements. The physical elements are depicted on a Public Safety Plan (Figure H7) and consist of: 1) warning signs (and whether they are lighted or not), 2) cable and float boat barriers, 3) security lighting, 4) sirens, and 5) a red flashing beacon. In addition, programmatic elements consist of measures incorporated into the plant's Emergency Action Plan (EAP). Figure H7 is located in Exhibit H, Appendix A.

The following table presents a breakdown of the physical elements at the station to warn the public of hazardous conditions.

Physical Element	Number	
Warning Signs	11 total. Four Upstream and Seven downstream	
Cable and Float Buoy Lines	2 sets. One upstream and one downstream	
Security Lighting	7 total. Seven upstream	
Warning Sign Lighting	One downstream sign is illuminated.	
Suspended Buoy Line Illumination	2 sets. One set on the east side of the reservoir and one set on the	
	west side of the reservoir	
Sirens	3 total. One near powerhouse discharges and one near trash gate	
Red Flashing Beacon	1 total. On the spillway near the trash gate	

Detailed information on the physical elements is presented in the following tables.

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Table	Title
Table H14	Summary Information for Warning Signs at Lloyd Shoals
Table H15	Upstream and Downstream Warnings at Lloyd Shoals
Table H16	Summary Information for Sirens at Lloyd Shoals
Table H17	Summary Information for Security and Warning Lights at Lloyd Shoals

The programmatic warning devices contained in the EAP consist of notifications to entities external to Georgia Power who can protect members of the downstream public in cases of a: 1) High Flow Event, 2) Non-Failure Event, 3) Potential Failure, or 4) Imminent Failure.

When a High Flow Event is declared, Georgia Power's Transmission Control Center System Operator makes two external-to-Georgia Power notifications to the NWS personnel in the State of Georgia, as well as the Southeast River Forecast Center (SRFC). The NWS and SRFC then issues timely warnings to areas downstream that may be impacted by high flows. The National Weather Service is responsible for the issuance of "Flood Watch" or "Flood Warning" bulletins, or weather-related information consistent with the forecast stage. To the extent possible, Georgia Power works closely with the NWS and the SRFC to ensure timely transfer of information relative to plant operations and spillway releases. In a High Flow Event, the Southern Company Generation (SCG) Dam Safety Supervisor makes two external to Georgia Power notifications. The first external notification is to the FERC Atlanta Regional Office, and the second is to the State of Georgia Safe Dams Program.

Should an EAP Non-Failure Event be declared, Georgia Power personnel have notifications which can vary from one to three external to Georgia Power entities. In a Non-Failure Event, the plant manager has the discretion to instruct that the Georgia Power's Transmission Control Center System Operator be notified of the situation. Should the plant manager so direct this notification, the Georgia Power's Transmission Control Center System Operator would notify the NWS and SRFC. If the plant manager does not direct the Georgia Power's Transmission Control Center System Operator to notify these entities, they would not be contacted. Regardless as to whether the plant manager does or does not authorize the notification of the Georgia Power's Transmission Control Center System Operator, the SCG Dam Safety Supervisor makes one external-to- Georgia Power notification to the FERC Atlanta Regional Office.

Should there be an EAP Potential or Imminent Failure emergency, Georgia Power notifies a total of 15 external-to-Georgia Power organizations or parties. The Georgia System Operator notifies two, the plant's Emergency Operations Team notifies 10, the Georgia Power Environmental & Natural Resources notifies one, and the SCG Dam Safety Supervisor notifies two. The parties notified by the Georgia System Operator are the: 1) NWS, and 2) Southeast River Forecast Center. The plant's Emergency Operations Team notifies the following 11 organizations or parties: 1) Georgia Power Environmental & Natural Resources, 2) Butts Co. Water, 3) Butts County EMA, 4) Jasper County EMA, 5) Monroe County EMA, 6) Jones County EMA, 7) Bibb County EMA, 8) GEMA/HS Area 4 Coordinator, 9) GEMA/HS Area 3 Coordinator, 10) Flovilla Fire Department, 11) GEMA / HS 24 Hour Line. The Georgia Power Environmental & Natural Resources notifies the Georgia DNR. The SCG Dam Safety Supervisor notifies the following two entities: 1) FERC Atlanta Regional Office, and 2) State of Georgia Safe Dams Program.

Table H14. Summary Information for Warning Signs at Lloyd Shoals

Sign Designator	Size (ft.)	Material Description/Wording Location		Lighted	Number	
Sign A	5 x 6	Metal	Danger Dam No Boats Per GA Law	Mounted on Upstream Side of Powerhouse	Yes	1
	5 x 6	Metal	Danger Dam No Boats Per GA Law	Mounted on Downstream Side of Powerhouse	Yes	1
	5 x 6	Metal	Danger Dam No Boats Per GA Law	Near the Western Anchor Point of the Reservoir Side Cable and Float Boat Barrier	No	1
	5 x 6	Metal	Danger Dam No Boats Per GA Law	Mounted on the Upstream Side of the Eastern Dam Abutment	No	1
Sign B	3 x 3	Aluminum	Danger for Your Own Safety Please Keep Out Rough Waters Gates at Dam Operate Automatically	Mounted on the Downstream Side of the Eastern Dam Abutment	No	1
	3 x 3	Aluminum	Danger for Your Own Safety Please Keep Out Rough Waters Gates at Dam Operate Automatically	Mounted on Downstream Side of Powerhouse	No	1
Sign C	6 x 4	Aluminum	Danger Water Subject to Rapid Rise and Turbulence	Approximately 1000' Downstream of Powerhouse on the Western Bank of the Ocmulgee River	No	1
Sign D	5 x 8	Metal	Danger Spillway Water Subject to Sudden Release and Violent Turbulence	Mounted on the Downstream Side of the Eastern Dam Abutment	No	1
Sign E	4 x 3	Metal	WARNING Water Subject to Rise and Become Swift at Any time Be Cautious If You Enter the River	On the Eastern Bank of the Ocmulgee River Near the Ocmulgee River Park Boat Ramp	No	1
Sign F	2.5 x 2	Metal	Hazardous Area Wear Life Vest by GA Law 52- 7-13	On the Eastern Bank of the Ocmulgee River Near the Ocmulgee River Park Boat Ramp	No	1
Sign G		Metal	Warning Loose Rocks on Slope Keep Off			1

Table H15. Upstream and Downstream Warnings at Lloyd Shoals

Designator	Location	Warning Upstream Public of Downstream Hazards	Warning Downstream Public of Upstream Hazards
Sign A	Near the Western Anchor Point of the	Yes	•
	Reservoir Side Boat Barrier		
	Mounted on Upstream Side of Powerhouse	Yes	
	Mounted on Downstream of Powerhouse		Yes
	Mounted on the Upstream Side of the	Yes	
	Eastern Dam Abutment		
Sign B	Mounted on the Downstream Side of the		Yes
	Powerhouse Adjacent to the Wingwall		
	Mounted on the Downstream Side of the		Yes
	Eastern Dam Abutment		
Sign C	Approximately 1000' Downstream of		Yes
	Powerhouse on the Western Bank of the		
	Ocmulgee River		
Sign D	Mounted on the Downstream Side of the		Yes
	Eastern Dam Abutment		
Sign E	On the Eastern Bank of the Ocmulgee River		Yes
	Near the Ocmulgee River Park Boat Ramp		
Sign F	On the Eastern Bank of the Ocmulgee River		Yes
	Near the Ocmulgee River Park Boat Ramp		
Sign G	West of the Access Road to the Eastern	Yes	
	Side of Spillway		

Structure	Location	Mode of Operation
Powerhouse	Directly below Powerhouse on the Western Tailrace Wall Guardrail	Powerhouse siren control is programmed to automatically sound upon loading of each generating unit. Sirens will sound for 3 minutes for wicket gate openings greater than 10% in Gate Control Mode or when unit output is increased greater than 0.5 MWs in Load Control Mode.
Trashgate	Located Near the Trash Gate	Prior to opening the trash gate, the operator makes a visual check of the downstream area. If necessary, the operator will warn and wait for individuals to clear the area. A siren is manually activated and the trash gate is opened at the end of the warning siren.
Trashgate	Located Near the Trash Gate	Prior to opening the first zone of the Obermeyer Gates, the operator activates a siren for a warning while making a visual inspection of the area downstream. If the area is clear the operator will start opening the gate. A siren is automatically activated and will alarm for 1 minute for each gate when the start open button is selected on the control panel. Additional gates are opened without a warning siren and may be opened from the Wallace control room.

Table H16. Summary Information for Sirens at Lloyd Shoals

Identifier	Structure	Location	Mode of Operation
Rotating	Spillway	Mounted adjacent	Activated when gate opens and remains lighted
Red Light		to the spillway	until gate closes.
		near the trash gate	
Security	Powerhouse	Mounted on the	7 Security Lights Across Dam and Powerhouse
Lights	and dam	powerhouse at the	
		headworks	

Table H17. Summary Information for Security and Warning Lights at Lloyd Shoals

18 CFR 5.18(c)(1)(ii)(B)(3) A discussion of any proposed changes to the operation of the project or downstream development that might affect the existing Emergency Action Plan, as described in subpart C of part 12 of this chapter, on file with the Commission;

There are no changes in the operation of the Project or downstream development that might affect the Emergency Action Plan which is on file with the Commission.

18 CFR 5.18(c)(1)(ii)(B)(4) A description of existing and planned monitoring devices to detect structural movement or stress, seepage, uplift, equipment failure, or water conduit failure, including a description of the maintenance and monitoring programs used or planned in conjunction with the devices; and

Lloyd Shoals Dam is manned from 7:00 A.M. until 3:00 P.M. Monday through Friday. When the dam is unmanned, its generating units are controlled and flows are monitored by an operator in the control room (manned 24/7) at Wallace Dam. When the plant is not manned and the gages upstream of the dam indicate that inflows may exceed plant capacity, Obermeyer gates will be opened. While all gates can be operated from Wallace, it is Georgia Power's policy that a team will be dispatched to operate the first zone of the Obermeyer spillway gates. Monitoring for equipment failure and water conduit failure occurs constantly. An operator inspects the project works on a weekly basis. Piezometers are read monthly to monitor for seepage. Deformation monuments are read yearly by Georgia Power to monitor any movement of the concrete or earth structures. Obermeyer spillway gates and the trash gate are tested annually and inspected every 10 years. The plant is independently examined and reviewed by FERC personnel on an annual basis, by independent 5-year consultants on a 5-year basis, and by Hydro Services Engineers twice each year. An underwater inspection is conducted every 5-years as a component of the 5-year independent consultant's inspection.

18 CFR 5.18(c)(1)(ii)(B)(5) A discussion of the project's employee safety and public safety record, including the number of lost-time accidents involving employees and the record of injury or death to the public within the project boundary.

This requirement is focused on two separate areas of safety. The first is for the employees at the Project and the other is for death or injury to the public. Each will be addressed in separate subsections below.

Employee Safety

Georgia Power follows the Occupational Safety and Health Administration Standard under 29 CFR § 1904 for recording and reporting occupational injuries and illnesses.

There have been two recordable injuries at Lloyd Shoals Project over the term of the license; both related to a muscle strain or sprain. Only one of the injuries resulted in a lost workday. The last injury occurred on August 25, 2020.

Death or Injury to the Public

There have been approximately 29 deaths and 21 injuries reported at the Project over the term of the current license. Documentation of these events is from a record search of the FERC E-Library or a manual search of Georgia Power's project files.

Table H18 shows a summary of records found regarding deaths and injuries at the Project. No deaths or injuries were caused by plant operations.

Date of Report	Date of Incident	Description of Incident	Number of Persons Injured	Number of Fatalities	Location
4/17/1995	4/2/1995	Drowning Fatality	0	1	Lake Jackson
8/8/1995		Injury/Property Damage	Injury/Property Damage 1 0		Document Not Accessible
8/15/1997	7/20/1997	Drowning Fatality	0	1	Lake Jackson
8/26/1999	8/6/1999	Boating Accident / Injury	1	0	Lake Jackson
10/25/1999	10/16/1999	Boating Accident / Injury and Fatality	3	1	Lake Jackson
6/12/2000	5/28/2000	Drowning Fatality	0	1	Lake Jackson
3/25/2003	3/8/2003	Fatality	0	1	Document Not Accessible
7/23/2003	7/10/2003	Drowning Fatality	0	1	Lake Jackson
6/16/2004	5/27/2004	Drowning Fatality	0	1	Ocmulgee River
7/27/2004	7/22/2004	Drowning Fatality	0	1	Lake Jackson
1/31/2005	9/6/2004	Drowning Fatality	0	1	Lake Jackson
1/31/2005	12/29/2004	Drowning Fatality	0	2	Lake Jackson

Table H18 Reported Fatalities and Injuries of Project Users

1/31/2005	9/20/2004	Drowning Fatality	0	1	Lake Jackson
6/20/2005	5/17/2005	Drowning Fatality	0	1	Lake Jackson
7/11/2005	7/3/2005	Boating Accident Injury	1	0	Lake Jackson
8/4/2005	7/24/2005	Boating Injury	1	0	Lake Jackson
8/4/2005	7/9/2005	Boating Injury	1	0	Lake Jackson
4/24/2006	4/14/2006	Boating Incident, Fatality and Property Damage	1	1	Lake Jackson
4/24/2006	4/16/2006	Boating Incident / Injury and Fatality	1	1	Lake Jackson
4/28/2006	4/21/2006	Boating Incident; Property Damage	1	0	Lake Jackson
9/12/2007	8/24/2007	Drowning Fatality	1	1	Lake Jackson
7/10/2008	7/5/2008	Boating Injury	1	1	Lake Jackson
7/10/2008	6/20/2008	Swimming Injury	1	0	Lake Jackson
7/10/2008	5/31/2008	Boating Injury	2	0	Lake Jackson
7/15/2008	6/20/2008	Boating Injury	1	0	Lake Jackson
2/23/2010	9/6/2009	Drowning Fatality	1	1	Lake Jackson
7/28/2010	7/10/2010	Swimming Injury	1	0	Lake Jackson
6/10/2011	5/23/2011	Drowning Injury and Fatality	1	1	Lake Jackson
6/3/2013	5/21/2013	Boating Accident, Injury and Fatality	1	1	Lake Jackson
7/2/2013	6/20/2013	Drowning Fatality	0	1	Factory Shoals Park
6/11/2014	6/7/2014	Drowning Fatality	0	1	Lake Jackson
3/10/2015	3/6/2015	Drowning Fatality	0	1	Lake Jackson
7/22/2015	7/8/2015	Boating Injury	1	0	Lake Jackson
1/19/2017	1/15/2017	Drowning Fatality	0	1	Lake Jackson
11/30/2017	11/5/2017	Drowning Fatality	0	1	Lake Jackson
7/9/2018	6/24/2018	Boating Injury	0	1	Lake Jackson
6/1/2020	5/28/2020	Drowning Fatality	0	1	Lake Jackson
8/24/2020	8/11/2020	Drowning Fatality	0	2	Lake Jackson

18 CFR 5.18(c)(1)(ii)(C) A description of the current operation of the project, including any constraints that might affect the manner in which the project is operated.

The primary operational constraints are discussed below:

1) Low Inflow Conditions / Minimum Flow

During low inflow periods, Georgia Power is likely to operate the Lloyd Shoals Project such that Lake Jackson falls below of the normal operating range of 527 to 530 PD. During low inflow periods or extended drought at Lloyd Shoals Dam, calculated inflows often drop below the 400 cfs minimum flow requirement. When this occurs, Lloyd Shoals reduces minimum flow to pass inflow. A 250 cfs continuous flow will continue to be passed, even when inflows are less, to supplement stream flows for downstream uses. During the most recent drought, in 2016, these supplemental flows of 250 cfs were provided for approximately 64 days causing the reservoir elevation to decline. The lowest recorded elevation of Lake Jackson due to the drought was 525.34 ft PD in 2016 (by comparison, the typical target low-level elevation during the homeowner drawdowns is 523 ft). During the refill period after the drought, Georgia Power continued to release 250 cfs supplemental flow to raise the elevation of Lake Jackson prior to increasing discharges from the Project. In 2016, calculated daily inflows were less than 400 cfs on 28.1 percent of the days and less than 250 cfs on 20.5 percent of the days.

2) Homeowner Dock Maintenance Drawdowns:

Homeowner dock maintenance drawdowns typically occur on a 3-year frequency in the fall. Lake Jackson is typically drawn down four feet to elevation 523 ft PD.

3) Climatic Conditions / Generating Output

Climatic conditions greatly influence the generating output possible from a hydroelectric generating plant. Obermeyer spillway gates were installed in 2011-2012, enhancing Georgia Power's control over Lake Jackson's fluctuations and allowing Georgia Power to preserve as much incoming water as possible for power generation. Since the installation of Obermeyer spillway gates, the annual generating output has ranged from 51,404 MWh to 86,542 MWh.

	Annual		
	Generation	Average	
Year	(MWh)	Inflow (cfs)	Category
2013	84,296	2,010	High
2014	65,245	1,488	Average
2015	79,413	2,417	High
2016	51,404	1,564	Average
2017	59,946	1,480	Average
2018	74,145	2,174	High
2019	63,811	2,010	Average
2020	86,542	3,041	High

18 CFR 5.18(c)(1)(ii)(D) A discussion of the history of the project and record of programs to upgrade the operation and maintenance of the project.

The history of the Project and the record of programs to upgrade the operation and maintenance of the Project are presented in Exhibit C (per section 18 CFR § 4.51 (d)).

18 CFR 5.18(c)(1)(ii)(E) A summary of any generation lost at the project over the last five years because of unscheduled outages, including the cause, duration, and corrective action taken.

The requested data is presented in tabular form in Exhibit H Table H19, titled Forced Outage Information, which is attached to this document. The corrective action for these instances was to address the cause of the outage and return the unit to service.

18 CFR 5.18(c)(1)(ii)(F) A discussion of the licensee's record of compliance with the terms and conditions of the existing license, including a list of all incidents of noncompliance, their disposition, and any documentation relating to each incident.

Georgia Power is in compliance with all existing license articles. Over the life of the previous license there have been some deviations of minimum flow under Article 402, which are further described below.

Details of compliance for each article are included below.

Article 1. The entire project, as described in this order of the Commission, shall be subject to all of the provisions, terms, and conditions of the license.

Georgia Power is in compliance with this article.

The Project has been subject to all the provisions, terms and conditions of the license as documented in other sections of this document. The documentation of this is presented in **Exhibit H Table H20**, titled **Article 1 General License Compliance**, in general, and more specifically in each table that follows from Table H21 through Table H46. All tables are attached to this document.

Article 2. No substantial change shall be made in the maps, plans, specifications, and statements described and designated as exhibits and approved by the Commission in its order as a part of the license until such change shall have been approved by the Commission: Provided, however, That if the Licensee or the Commission deems it necessary or desirable that said approved exhibits, or any of them, be changed, there shall be submitted to the Commission for approval a revised, or additional exhibit or exhibits covering the proposed changes which, upon approval by the Commission, shall become a part of the license and shall supersede, in whole or in part, such exhibit or exhibits theretofore made a part of the license as may be specified by the Commission.

Georgia Power is in compliance with this article.

Georgia Power has not made any substantial changes in the exhibits that have not been filed with the Commission. When Commission approval was required, Georgia Power sought approval and the Commission documented its approval through Commission-issued orders. In some cases, additional information was requested by the Commission and Georgia Power filed the information as requested.

Georgia Power has been diligent in carrying out the terms of the license articles. Where changes to specific license articles have been necessary, these changes have been transmitted to the Commission for approval.

The documentation of this, as well as the documentation of the approvals and subsequent orders is presented in **Exhibit H Table H21**, titled **Article 2 General Conformity to Exhibits**, which is attached to this document.

Article 3. The project area and project works shall be in substantial conformity with the approved exhibits referred to in Article 2 herein or as changed in accordance with the provisions of said article. Except when emergency shall require for the protection of navigation, life, health, or property, there shall not be made without prior approval of the Commission any substantial alteration or addition not in conformity with the approved plans to any dam or other project works under the license or any substantial use of project lands and waters not authorized herein; and any emergency alteration, addition, or use so made shall thereafter be subject to such modification and change as the Commission may direct. Minor changes in project works, or in uses of project lands and waters, or divergence from such approved exhibits may be made if such changes will not result in a decrease in efficiency, in a material increase in cost, in an adverse environmental impact, or in impairment of the general scheme of development; but any of such minor changes made without the prior approval of the Commission, which in its judgment have produced or will produce any of such results, shall be subject to such alteration as the Commission may direct.

Georgia Power is in compliance with this article.

Georgia Power has operated the Project in conformity with the plans and specifications approved by the Commission. Minor changes in the hydroelectric Project have occurred as a result of maintenance, upgrades, or improvements; however, none of these changes has resulted in a decrease in efficiency, a material increase in costs, an adverse environmental impact, or impairment of the general scheme of development. Georgia Power has complied with the Commission's rules and regulations, as well as the requirements outlined in the approved license articles.

Documentation of this compliance, as well as documentation of the approvals and subsequent orders, is presented in **Exhibit H Table H22**, titled **Article3 Exhibits, Plans, and Drawings**, which is included in this Exhibit H.

Article 4. The project, including its operation and maintenance and any work incidental to additions or alterations authorized by the Commission, whether or not conducted upon lands of the United States, shall be subject to the inspection and supervision of the Regional Engineer, Federal Energy Regulatory Commission, in the region wherein the project is located, or of such other officer or agent

as the Commission may designate, who shall be the authorized representative of the Commission for such purposes. The Licensee shall cooperate fully with said representative and shall furnish him such information as he may require concerning the operation and maintenance of the project, and any such alterations thereto, and shall notify him of the date upon which work with respect to any alteration will begin, as far in advance thereof as said representative may reasonably specify, and shall notify him promptly in writing of any suspension of work for a period of more than one week, and of its resumption and completion. The Licensee shall submit to said representative a detailed program of inspection by the Licensee that will provide for an adequate and qualified inspection force for construction of any such alterations to the project. Construction of said alterations or any feature thereof has been approved by said representative. The Licensee shall allow said representative and other officers or employees of the United States, showing proper credentials, free and unrestricted access to, through, and across the project lands and project works in the performance of their official duties. The Licensee shall comply with such rules and regulations of general or special applicability as the Commission may prescribe from time to time for the protection of life, health, or property.

Georgia Power is in compliance with this article.

The FERC Atlanta Regional Office performs an Annual Operation Inspection of the Project. Any issues identified during the inspections were addressed to the satisfaction of the FERC.

Environmental and Public Use inspections have been performed at the Project by FERC on a periodic basis. Georgia Power provides any information requested by the inspector, and any recommendations resulting from the inspection are addressed and resolved.

In addition to these inspections, FERC regulations require inspections by an independent consultant on a recurring 5-year basis. Copies of the inspection reports are filed with FERC. Any recommendations or corrective measures identified in these inspections are addressed to the satisfaction of FERC. Where FERC has asked for periodic reports, such as the certification of spillway gate testing, or surveillance/instrumentation reports, these have been filed with FERC as requested.

Documentation of compliance with this license article is presented in **Exhibit H Table H23**, titled **Article 4 Project Inspections and Submittals**, which is included in this Exhibit H.

Article 5. The Licensee, within five years from the date of issuance of the license, shall acquire title in fee or the right to use in perpetuity all lands, other than lands of the United States, necessary or appropriate for the construction maintenance, and operation of the project. The Licensee or its successors and assigns shall, during the period of the license, retain the possession of all project property covered by the license as issued or as later amended, including the project area, the project works, and all franchises, easements, water rights, and rights or occupancy and use; and none of such properties shall be voluntarily sold, leased, transferred, abandoned, or otherwise disposed of without the prior written approval of the Commission, except that the Licensee may lease or otherwise dispose of interests in project lands or property without specific written approval of the Commission pursuant to the then current regulations of the Commission. The provisions of this article are not intended to prevent the abandonment or the retirement from service of structures, equipment, or

other project works in connection with replacements thereof when they become obsolete, inadequate, or inefficient for further service due to wear and tear; and mortgage or trust deeds or judicial sales made thereunder, or tax sales, shall not be deemed voluntary transfers within the meaning of this article.

Georgia Power is in compliance with this article.

Georgia Power has acquired titles or the rights to use all lands and has retained possession of all project property. Where the disposition of property or rights was required, Georgia Power did so only after receiving written approval from FERC or acting pursuant to then-current FERC regulations. There are no federal lands within the project.

Documentation of compliance with this license article is presented in Exhibit H Table H24, titled Article 5 Acquisition of Lands and Rights of Use, which is included in this Exhibit H.

Article 6. In the event the project is taken over by the United States upon the termination of the license as provided in Section 14 of the Federal Power Act, or is transferred to a new licensee or to a nonpower licensee under the provisions of Section 15 of said Act, the Licensee, its successors and assigns shall be responsible for, and shall make good any defect of title to, or of right of occupancy and use in, any of such project property that is necessary or appropriate or valuable and serviceable in the maintenance and operation of the project, and shall pay and discharge, or shall assume responsibility for payment and discharge of, all liens or encumbrances upon the project or project property created by the Licensee or created or incurred after the issuance of the license: Provided, That the provisions of this article are not intended to require the Licensee, for the purpose of transferring the project to the United States or to a new licensee, to acquire any different title to, or right of occupancy and use in, any of such project property than was necessary to acquire for its own purposes as the Licensee.

Georgia Power is in compliance with this article.

To date, Georgia Power is unaware of any notification from the Federal government that it intends to take over the Project at the end of the current license period. Georgia Power does not intend to transfer the Project to a new licensee, as is demonstrated by the fact that Georgia Power is seeking a new license for the Project.

Article 7. The actual legitimate original cost of the project, and of any addition thereto or betterment thereof, shall be determined by the Commission in accordance with the Federal Power Act and the Commission's Rules and Regulations thereunder.

Georgia Power is in compliance with this article.

Georgia Power understands and accepts that FERC determines the actual legitimate original cost of the original Project and any additions or betterments to the Project.

Article 8. The Licensee shall install and thereafter maintain gages and stream- gaging stations for the purpose of determining the stage and flow of the stream or streams on which the project is located, the amount of water held in and withdrawn from storage, and the effective head on the turbines; shall provide for the required reading of such gages and for the adequate rating of such stations; and shall install and maintain standard meters adequate for the determination of the amount of electric energy generated by the project works. The number, character, and location of gages, meters, or other measuring devices, and the method of operation thereof, shall at all times be satisfactory to the Commission or its authorized representative. The Commission reserves the right, after notice and opportunity for hearing, to require such alterations in the number, character, and location of gages, meters, or other measuring devices, and the method of operation thereof, as are necessary to secure adequate determinations. The installation of gages, the rating of said stream or streams, and the determination of the flow thereof, shall be under the supervision of, or in cooperation with, the District Engineer of the United States Geological Survey having charge of stream-gaging operations in the region of the project, and the Licensee shall advance to the United States Geological Survey the amount of funds estimated to be necessary for such supervision, or cooperation for such periods as may mutually agreed upon. The Licensee shall keep accurate and sufficient records of the foregoing determinations to the satisfaction of the Commission, and shall make return of such records annually at such time and in such form as the Commission may prescribe

Georgia Power is in compliance with this article.

Georgia Power has made payments to the United States Geological Survey (USGS) for the purposes of installing, reading, rating, and maintaining stream flow gages. Georgia Power also submits an annual statement of electrical generation to FERC for the purposes of determining annual charges. This statement uses information from the electrical meters installed at the Project.

Georgia Power maintains instruments that measure forebay and tailrace surface water elevations at the powerhouse. These measurements can be used to calculate the amount of water storage in and released from Lake Jackson and the head on the turbines.

Documentation of compliance with this license article is presented in Exhibit H Table H25, titled Article 8 USGS Gages and Plant Electrical Gages, which is included in this Exhibit H.

Article 9. The Licensee shall, after notice and opportunity for hearing, install additional capacity or make other changes in the project as directed by the Commission, to the extent that it is economically sound and in the public interest to do so.

Georgia Power is in compliance with this article.

Over the term of the 1993 license, Georgia Power has completed various improvements to the Lloyd Shoals Project which are detailed in the Construction History, Exhibit C. The majority of the improvements were licensee-led projects, conducted for operations and maintenance purposes.

However, a few improvements, detailed below, were conducted under the direction of FERC's Atlanta Regional Office and in the interest of facility and public safety.

In accordance with newly published FERC Guidelines and a re-evaluation of PMF, the spillway, intake and powerhouse, and the west non-overflow section were strengthened by the addition of posttensioned anchors. Field studies to determine the uplift on the base and the quality of concrete, foundation rock and the concrete-to-rock interface were conducted from 1988 through 1989, during the design phase. Initial studies began in 1985 and construction was completed in 1991.

As a result of the re-evaluation of the PMF, grouted riprap was added on the upstream crest of the east earth embankment, raising the top of the riprap to elevation 544.5 feet. This was done to minimize damage to the earth embankment from overtopping during the PMF event. The newly calculated PMF level was elevation 543.8 feet.

In June 2008, the two saddle dikes north of the dam on Jackson Lake Road were replaced, by a single dike with a higher crest elevation. It was constructed immediately downstream of the original dikes. The new dike was needed due to the revised PMF elevation.

Article 10. The Licensee shall, after notice and opportunity for hearing, coordinate the operation of the project, electrically and hydraulically, with such other projects or power systems and in such manner as the Commission may direct in the interest of power and other beneficial public uses of water resources, and on such conditions concerning the equitable sharing of benefits by the Licensee as the Commission may order.

Georgia Power is in compliance with this article.

The Lloyd Shoals Project is operated in compliance with Article 402 in the Order Issuing License dated March 25, 1993, which provides for minimum flows to be released for downstream use. Additionally, the electrical output from Lloyd Shoals flows onto Georgia Power's transmission grid, which is centrally coordinated so as to provide electricity to the state of Georgia and other electrical entities (e.g., Southern Company subsidiaries and other non-Southern Company electrical utilities).

Article 11. Whenever the Licensee is directly benefited by the construction work of another licensee, a permittee, or the United States on a storage reservoir or other headwater improvement, the Licensee shall reimburse the owner of the headwater improvement for such part of the annual charges for interest, maintenance, and depreciation thereof as the Commission shall determine to be equitable, and shall pay to the United States the cost of making such determination as fixed by the Commission. For benefits provided by a storage reservoir or other headwater improvement of the United States, the Licensee shall pay to the Commission the amounts for which it is billed from time to time for such headwater benefits and for the cost of making the determinations pursuant to the then current regulations of the Commission under the Federal Power Act.

Georgia Power is in compliance with this article.

There are no FERC-licensed hydro projects nor any federal hydro projects upstream of Lloyd Shoals Dam. As such, FERC has not assessed Georgia Power with any annual headwater benefit charges over the course of the original license.

Article 12. The operations of the Licensee, so far as they affect the use, storage and discharge from storage of waters affected by the license, shall at all times be controlled by such reasonable rules and regulations as the Commission may prescribe for the protection of life, health, and property, and in the interest of the fullest practicable conservation and utilization of such waters for power purposes and for other beneficial public uses, including recreational purposes, and the Licensee shall release water from the project reservoir at such rate in cubic feet per second, or such volume in acre-feet per specified period of time, as the Commission may prescribe for the purposes hereinbefore mentioned.

Georgia Power is in compliance with this article.

Georgia Power also recognizes that the FERC may prescribe water releases for 1) the protection of life, health, and property, 2) the fullest practicable conservation and utilization for power purposes, or 3) other beneficial public use, including recreational purposes. To date, Georgia Power is unaware of any request from FERC for any such water releases.

Documentation of compliance with this license article is presented in **Exhibit H Table H26**, titled **Article 12 Prescription of Rules for Protection of Life, Health, and Property**, which is included in this Exhibit H.

Article 13. On the application of any person, association, corporation, Federal agency, State or municipality, the Licensee shall permit such reasonable use of its reservoir or other project properties, including works, lands and water rights, or parts thereof, as may be ordered by the Commission, after notice and opportunity for hearing, in the interests of comprehensive development of the waterway or waterways involved and the conservation and utilization of the water resources of the region for water supply or for the purposes of steam-electric, irrigation, industrial, municipal or similar uses. The Licensee shall receive reasonable compensation for use of its reservoir or other project properties or parts thereof for such purposes, to include at least full reimbursement for any damages or expenses which the joint use causes the Licensee to incur. Any such compensation shall be fixed by the Commission either by approval of an agreement between the Licensee and the party or parties benefiting or after notice and opportunity for hearing. Applications shall contain information in sufficient detail to afford a full understanding of the proposed use, including satisfactory evidence that the applicant possesses necessary water rights pursuant to applicable State law, or a showing of cause why such evidence cannot concurrently be submitted, and a statement as to the relationship of the proposed use to any State or municipal plans or orders which may have been adopted with respect to the use of such waters.

Georgia Power is in compliance with this article.

Georgia Power has not received an order by the Commission to permit use of the Project in the interests of comprehensive development of the waterway or waterways involved and the conservation

and utilization of the water resources of the region for water supply or for the purposes of steamelectric, irrigation, industrial, municipal, or similar uses. Georgia Power has permitted use and occupancy of the Project consistent with the terms of Article 203.

Documentation of compliance with this license article is presented in **Exhibit H Table H27**, titled **Article 13 Comprehensive Development of Waterway**, which is included in this Exhibit H.

Article 14. In the construction or maintenance of the project works, the Licensee shall place and maintain suitable structures and devices to reduce to a reasonable degree the liability of contact between its transmission lines and telegraph, telephone and other signal wires or power transmission lines constructed prior to its transmission lines and not owned by the Licensee, and shall also place and maintain suitable structures and devices to reduce to a reasonable degree the liability of any structures or wires falling or obstructing traffic or endangering life. None of the provisions of this article are intended to relieve the Licensee from any responsibility or requirement which may be imposed by any other lawful authority for avoiding or eliminating inductive interference.

Georgia Power is in compliance with this article.

Over the course of the original license, Georgia Power has adhered to safety requirements to minimize any contacts between its transmission lines and any other infrastructure lines or structures.

Documentation of compliance with this license article is presented in **Exhibit H Table H28**, titled **Article 14 Power and Communication Lines**, which is included in this Exhibit H.

Article 15. The Licensee shall, for the conservation and development of fish and wildlife resources, construct, maintain, and operate, or arrange for the construction, maintenance, and operation of such reasonable facilities, and comply with such reasonable modifications of the project structures and operation, as may be ordered by the Commission upon its own motion or upon the recommendation of the Secretary of the Interior or the fish and wildlife agency or agencies of any State in which the project or a part thereof is located, after notice and opportunity for hearing.

Georgia Power is in compliance with this article.

On an ongoing basis, Georgia Power has voluntarily coordinated with Federal and State fish and wildlife resource agencies on measures for the conservation, development, and enhancement of natural resources as discussed in Exhibit E.

Documentation of compliance with this license article is presented in **Exhibit H Table H29**, titled **Article 15 Commission Ordered Enhancements to Fish and Wildlife Resources**, which is included in this Exhibit H and documents compliance with this license article.

Article 16. Whenever the United States shall desire, in connection with the project, to construct fish and wildlife facilities or to improve the existing fish and wildlife facilities at its own expense, the

Licensee shall permit the United States or its designated agency to use, free of cost, such of the Licensee's lands and interests in lands, reservoirs, waterways and project works as may be reasonably required to complete such facilities or such improvements thereof. In addition, after notice and opportunity for hearing, the Licensee shall modify the project operation as may be reasonably prescribed by the Commission in order to permit the maintenance and operation of the fish and wildlife facilities constructed or improved by the United States under the provisions of this article. This article shall not be interpreted to place any obligation on the United States to construct or improve fish and wildlife facilities or to relieve the Licensee of any obligation under this license.

Georgia Power is in compliance with this article.

Georgia Power is not aware of any requests made by state or federal environmental resource agencies to construct, at their own expense, fish and wildlife facilities or improve the existing fish and wildlife facilities within the Lloyd Shoals Project.

Article 17. The Licensee shall construct, maintain, and operate, or shall arrange for the construction, maintenance, and operation of such reasonable recreational facilities, including modifications thereto, such as access roads, wharves, launching ramps, beaches, picnic and camping areas, sanitary facilities, and utilities, giving consideration to the needs of the physically handicapped, and shall comply with such reasonable modifications of the project, as may be prescribed hereafter by the Commission during the term of this license upon its own motion or upon the recommendation of the Secretary of the Interior or other interested Federal or State agencies, after notice and opportunity for hearing.

Georgia Power is in compliance with this article.

Documentation of Georgia Power's compliance with recreation-related license requirements is documented under Articles 404 (Recreation and Land Use Enhancement) and 405 (Recreation Monitoring).

Georgia Power has not received prescriptive recommendations for modifications to recreational amenities at the Lloyd Shoals Project.

Article 18. So far as is consistent with proper operation of the project, the Licensee shall allow the public free access, to a reasonable extent, to project waters and adjacent project lands owned by the Licensee for the purpose of full public utilization of such lands and waters for navigation and for outdoor recreational purposes, including fishing and hunting: Provided, That the Licensee may reserve from public access such portions of the project waters, adjacent lands, and project facilities as may be necessary for the protection of life, health, and property.

Georgia Power is in compliance with this article.

Through its website, www.georgiapower.com, Georgia Power notifies the public that project lands and waters are open for free public access. The website features daily lake levels and an interactive map of the Lloyd Shoals Project such that interested recreation users can explore points of access to the water,

park amenities, and information about site accessibility. Specifically, for property owners adjacent to the Project's shoreline, the website features Shoreline Guidelines and information on permitting structures on Project lands and waters. Key contacts are listed on the website for recreation users desiring additional information. In addition, the website provides a link to the Georgia Department of Natural Resources Licenses and Permits page for education and information on obtaining a fishing permit. Hunting is not an amenity offered at the Lloyd Shoals Project.

Additionally, in accordance with 18 CFR § 12.42, Georgia Power does prohibit members of the public from accessing potentially hazardous areas of the Project. Georgia Power uses warning signs and lights, sirens, and cable and float boat barriers for this purpose.

Documentation of compliance with this license article is presented in **Exhibit H Table H30**, titled **Article 18 Public Access and Recreation**, which is included in this Exhibit H.

Article 19. In the construction, maintenance, or operation of the project, the Licensee shall be responsible for, and shall take reasonable measures to prevent, soil erosion on lands adjacent to streams or other waters, stream sedimentation, and any form of water or air pollution. The Commission, upon request or upon its own motion, may order the Licensee to take such measures as the Commission finds to be necessary for these purposes, after notice and opportunity for hearing.

Georgia Power is in compliance with this article.

Georgia Power manages the shoreline of Lake Jackson in accordance with its Shoreline Guidelines and Permitting Program. The guidelines provide guidance to lake residents on permits required for various types of construction on lands within the Lloyd Shoals project boundary and on Georgia Power owned lease lots. A permit must be obtained prior to commencing construction, renovation, tree removal and land disturbing activities. This establishes agreement between Georgia Power and lake residents with respect to the requirements related to specific activities, including, seawalls, docks, boathouses, dredging, tree removal and landscaping, residential dwelling on lease lots, boat and personal watercraft lifts, outbuilding construction, and marinas. Permits are designed to minimize shoreline disturbance to protect vegetative buffers surrounding the lake. The enforcement of these guidelines prevents shoreline erosion and sedimentation from leaving the construction area.

Georgia Power issues permits to lake residents for controlling aquatic nuisance vegetation near their lake lots by requiring application by licensed herbicide applicators.

Documentation of compliance with this license article is presented in **Exhibit H Table H31**, titled **Article 19 Pollution Prevention**, which is included in this Exhibit H.

Article 20. The Licensee shall clear and keep clear to an adequate width lands along open conduits and shall dispose of all temporary structures, unused timber, brush, refuse, or other material unnecessary for the purposes of the project which results from the clearing of lands or from the maintenance or alteration of the project works. In addition, all trees along the periphery of project reservoirs which may die during operations of the project shall be removed. All clearing of the lands and disposal of the unnecessary material shall be done with due diligence and to the satisfaction of

the authorized representative of the Commission and in accordance with appropriate Federal, State, and local statutes and regulations.

Georgia Power is in compliance with this article.

Article 21. If the Licensee shall cause or suffer essential project property to be removed or destroyed or to become unfit for use, without adequate replacement, or shall abandon or discontinue good faith operation of the project or refuse or neglect to comply with the terms of the license and the lawful orders of the Commission mailed to the record address of the Licensee or its agent, the Commission will deem it to be the intent of the Licensee to surrender the license. The Commission, after notice and opportunity for hearing, may require the Licensee to remove any or all structures, equipment and power lines within the project boundary and to take any such other action necessary to restore the project waters, lands, and facilities remaining within the project boundary to a condition satisfactory to the United States agency having jurisdiction over its lands or the Commission may prescribe. In addition, the Commission in its discretion, after notice and opportunity for hearing of the license when the Commission, for the reasons recited herein, deems it to be the intent of the License to surrender the license.

Georgia Power is in compliance with this article.

Georgia Power recognizes FERC's right to terminate the license. Georgia Power has not had, nor does it currently have, any intention of doing any of the actions which would trigger FERC termination of the license. As documented in other sections, Georgia Power has adhered to the letter and spirit of all FERC orders and terms of its license. Georgia Power has consistently operated the Project in accordance with the license requirements. When plant equipment has required replacement, Georgia Power has done so. Additionally, Georgia Power is seeking a new license for the Project so as to continue to provide cost effective electrical service to its customers.

Article 22. The right of the Licensee and of its successors and assigns to use or occupy waters over which the United States has jurisdiction, or lands of the United States under the license, for the purpose of maintaining the project works or otherwise, shall absolutely cease at the end of the license period, unless the Licensee has obtained a new license pursuant to the then existing laws and regulations, or an annual license under the terms and conditions of this license.

Georgia Power is in compliance with this article.

There are no federal lands within the Project.

Article 23. The terms and conditions expressly set forth in the license shall not be construed as impairing any terms and conditions of the Federal Power Act which are not expressly set forth herein.

Georgia Power is in compliance with this article.

Georgia Power recognizes that it must comply with all provisions of the Federal Power Act and its implementing regulations which are not expressly specified in the license articles. In other sections, Georgia Power has documented its compliance with these provisions, which include, but are not limited to: 1) 18 CFR 12.10(b) Deaths or Serious Injuries; 2) 18 CFR 12.11(b)(2) Reporting of Non-Emergency Modifications; 3) 18 CFR 12.20 Emergency Action Plans (EAPs); 4) 18 CFR 12.30 5-Year Part 12 Inspections By Independent Consultants; 5) 18 CFR 12.41 Dam Safety Monitoring Instrumentation; 6) 18 CFR 12.42 Warning and Safety Devices; 7) 18 CFR 8.11(a)(2) Information on Use and Development of Public Recreational Opportunities, and 8) 18 CFR 12.44 Testing of Spillway Gates. Georgia Power plans to continue to fulfill its regulatory responsibilities if it is granted a new license for the Project.

<u>Article 201.</u> The Licensee shall pay the United States an annual charge, effective January 1, 1994, for the purpose of reimbursing the United States for the cost of administration of Part I of the Act, as determined by the Commission. The authorized installed capacity for that purpose is 24,000 horsepower.

Georgia Power is in compliance with this article.

Documentation of compliance with this license article is presented in **Exhibit H Table H32, titled Article 201 Annual Administrative Charges**, which is included in Exhibit H.

<u>Article 202</u>. Pursuant to Section 10(d) of the Act, a specified reasonable rate of return upon the net investment in the project shall be used for determining surplus earnings of the project for the establishment and maintenance of amortization reserves. The Licensee shall set aside in a project amortization reserve account at the end of each fiscal year one half of the project surplus earnings, if any, in excess of the specified rate of return per annum on the net investment. To the extent that there is a deficiency of project earnings below the specified rate of return per annum for any fiscal year, the Licensee shall deduct the amount of that deficiency from the amount of any surplus earnings subsequently accumulated, until absorbed. The Licensee shall set aside one-half of the remaining surplus earnings, if any, cumulatively computed, in the project amortization reserve account until further order of the Commission.

The specified reasonable rate of return used in computing amortization reserves shall be calculated annually based on current capital ratios developed from an average of 13 monthly balances of amounts properly includible in the Licensee's long- term debt and proprietary capital accounts as listed in the Commission's Uniform System of Accounts. The cost rate for such ratios shall be the weighted average cost of long-term debt and preferred stock for the year, and the cost of common equity shall be the interest rate on 10-year government bonds (reported as the Treasury Department's 10-year constant maturity series) computed on the monthly average for the year in question plus four percentage points (400 basis points).

Georgia Power is in compliance with this article.

<u>Article 203</u>. (a) In accordance with the provisions of this article, the Licensee shall have the authority to grant permission for certain types of use and occupancy of project lands and waters and to convey certain interests in project lands and waters for certain types of use and occupancy, without prior Commission approval. The Licensee may exercise the authority only if the proposed use and occupancy is consistent with the purposes of protecting and enhancing the scenic, recreational, and other environmental values of the project. For those purposes, the Licensee shall also have continuing responsibility to supervise and control the use and occupancies for which it grants permission, and to monitor the use of, and ensure compliance with the covenants of the instrument of conveyance for, any interests that it has conveyed under this article. If a permitted use and occupancy violates any condition of this article or any other condition imposed by the Licensee for protection and enhancement of the project's scenic, recreational, or other environmental values, or if a covenant of a conveyance made under the authority of this article is violated, the Licensee shall take any lawful action necessary to correct the violation. For a permitted use or occupancy, that action includes, if necessary, canceling the permission to use and occupy the project lands and waters and requiring the removal of any non-complying structures and facilities.

(b) The types of use and occupancy of project lands and waters for which the Licensee may grant permission without prior Commission approval are: (1) landscape plantings; (2) non- commercial piers, landings, boat docks, or similar structures and facilities that can accommodate no more than 10 watercraft at a time and where said facility is intended to serve single-family type dwellings; (3) embankments, bulkheads, retaining walls, or similar structures for erosion control to protect the existing shoreline; and (4) food plots and other wildlife enhancement. To the extent feasible and desirable to protect and enhance the project's scenic, recreational, and other environmental values, the Licensee shall require multiple use and occupancy of facilities for access to project lands or waters. The Licensee shall also ensure, to the satisfaction of the Commission's authorized representative, that the use and occupancies for which it grants permission are maintained in good repair and comply with applicable state and local health and safety requirements. Before granting permission for construction of bulkheads or retaining walls, the Licensee shall: (1) inspect the site of the proposed construction, (2) consider whether the planting of vegetation or the use of riprap would be adequate to control erosion at the site, and (3) determine that the proposed construction is needed and would not change the basic contour of the reservoir shoreline. To implement this paragraph (b), the Licensee may, among other things, establish a program for issuing permits for the specified types of use and occupancy of project lands and waters, which may be subject to the payment of a reasonable fee to cover the Licensee's costs of administering the permit program. The Commission reserves the right to require the Licensee to file a description of its standards, guidelines, and procedures for implementing this paragraph (b) and to require modification of those standards, guidelines, or procedures.

(c) The Licensee may convey easements or rights-of-way across, or leases of, project lands for: (1) replacement, expansion, realignment, or maintenance of bridges or roads where all necessary state and federal approvals have been obtained; (2) storm drains and water mains; (3) sewers that do not discharge into project waters; (4) minor access roads; (5) telephone, gas, and electric utility distribution lines; (6) non-project overhead electric transmission lines that do not require erection of support structures within the project boundary; (7) submarine, overhead, or underground major telephone distribution cables or major electric distribution lines (69-kV or less); and (8) water intake

or pumping facilities that do not extract more than one million gallons per day from a project reservoir.

No later than January 31 of each year, the licensee shall file three copies of a report briefly describing for each conveyance made under this paragraph (c) during the prior calendar year, the type of interest conveyed, the location of the lands subject to the conveyance, and the nature of the use for which the interest was conveyed.

(d) The Licensee may convey fee title to, easements or rights-of-way across, or leases of project lands for: (1) construction of new bridges or roads for which all necessary state and federal approvals have been obtained; (2) sewer or effluent lines that discharge into project waters, for which all necessary federal and state water quality certification or permits have been obtained; (3) other pipelines that cross project lands or waters but do not discharge into project waters; (4) non-project overhead electric transmission lines that require erection of support structures within the project boundary, for which all necessary federal and state approvals have been obtained; (5) private or public marinas that can accommodate no more than 10 watercraft at a time and are located at least one- half mile (measured over project waters) from any other private or public marina; (6) recreational development consistent with an approved Exhibit R or approved report on recreational resources of an Exhibit E; and (7) other uses, if: (i) the amount of land conveyed for a particular use is five acres or less; (ii) all of the land conveyed is located at least 75 feet, measured horizontally, from project waters at normal surface elevation; and (iii) no more than 50 total acres of project lands for each project development are conveyed under this clause (d)(7) in any calendar year. At least 60 days before conveying any interest in project lands under this paragraph (d), the Licensee must submit a letter to the Director, Office of Hydropower Licensing, stating its intent to convey the interest and briefly describing the type of interest and location of the lands to be conveyed (a marked exhibit G or K map may be used), the nature of the proposed use, the identity of any federal or state agency official consulted, and any federal or state approvals required for the proposed use. Unless the Director, within 45 days from the filing date, requires the Licensee to file an application for prior approval, the Licensee may convey the intended interest at the end of that period.

(e) The following additional conditions apply to any intended conveyance under paragraph (c) or (d) of this article: (1) Before conveying the interest, the Licensee shall consult with federal and state fish and wildlife or recreation agencies, as appropriate, and the State Historic Preservation Officer. (2) Before conveying the interest, the Licensee shall determine that the proposed use of the lands to be conveyed is not inconsistent with any approved exhibit R or approved report on recreational resources of an exhibit E; or, if the project does not have an approved exhibit R or approved report on recreational resources, that the lands to be conveyed do not have recreational value. (3) The instrument of conveyance must include the following covenants running with the land: (i) the use of the lands conveyed shall not endanger health, create a nuisance, or otherwise be incompatible with overall project recreational use; (ii) the grantee shall take all reasonable precautions to insure that the construction, operation, and maintenance of structures or facilities on the conveyed lands will occur in a manner that will protect the scenic, recreational, and environmental values of the project; and (iii) the grantee shall not unduly restrict public access to project waters. (4) The Commission reserves the right to require the Licensee to take reasonable remedial action to correct any violation of the terms and conditions of this article, for the protection and enhancement of the project's scenic, recreational, and other environmental values.

(f) The conveyance of an interest in project lands under this article does not in itself change the project boundaries. The project boundaries may be changed to exclude land conveyed under this article only upon approval of revised exhibit G or K drawings (project boundary maps) reflecting exclusion of that land. Lands conveyed under this article will be excluded from the project only upon a determination that the lands are not necessary for project purposes, such as operation and maintenance, flowage, recreation, public access, protection of environmental resources, and shoreline control, including shoreline aesthetic values. Absent extraordinary circumstances, proposals to exclude lands conveyed under this article from the project shall be consolidated for consideration when revised exhibit G or K drawings would be filed for approval for other purposes.

(g) The authority granted to the Licensee under this article shall not apply to any part of the public lands and reservations of the United States included within the project boundary.

Georgia Power is in compliance with this article.

Georgia Power manages the shoreline of Lake Jackson in accordance with its Shoreline Management Guidelines. These guidelines provide guidance to lake residents on the permitting and construction of shoreline structures. A permit must be obtained from Georgia Power before any party starts any construction, renovation, tree removal, or land disturbance activities on Georgia Power lands. The Shoreline Management Guidelines list specific Lake Jackson requirements and restrictions for the construction of seawalls, docks, wharves, boat slips, and boat lifts/personal watercraft lifts. The requirements minimize shoreline disturbance from tree removal, mechanical clearing, and other activities to protect vegetative buffers surrounding the lake. The enforcement of these guidelines reduces the quantity and impact of erosion.

In addition, Georgia Power adheres to its Small Dredging Permit Program, which was approved by FERC on June 28, 1993. With FERC's approval to implement this program Georgia Power was given the authority to grant permits for small dredging activities ranging from 1 to 500 cubic yards, with protocols in place to ensure protection of resources.

Annual Dredging and Conveyance Reports have been filed at the FERC.

Documentation of compliance with this license article is presented in **Exhibit H Table H33**, titled **Article 203 Standard Land Use Article**, which is included in this Exhibit H.

<u>Article 401.</u> Within 90 days from the effective date of this license, the Licensee shall file with the Commission for approval a plan to monitor dissolved oxygen (DO) in the Ocmulgee River downstream of the project. The plan shall include a schedule for submitting the monitoring results to the Commission and the Georgia Department of Natural Resources (GDNR) and recommendations on measures needed to ensure maintenance of the state DO standard as measured downstream of the project.

The Licensee shall prepare the plan after consultation with the GDNR. The Licensee shall include with the plan documentation of consultation and copies of comments and recommendations made on the

completed plan after it has been prepared and provided to the GDNR and specific descriptions of how the GDNR's comments are accommodated by the plan. The Licensee shall allow a minimum of 30 days for the GDNR to comment and to make recommendations prior to filing the plan with the Commission. If the Licensee does not adopt a recommendation, the filing shall include the Licensee's reasons, based on project-specific information.

The Commission reserves the right to require changes to the plan. Upon Commission approval, the Licensee shall implement the plan, including any changes required by the Commission.

If the results of monitoring indicate that changes in project structures or operations are necessary to ensure maintenance of the state DO standard downstream, the Commission may direct the License to modify project structures or operations.

Georgia Power filed a plan to monitor dissolved oxygen levels in the Ocmulgee River on March 22, 1994. This plan was approved two months later on June 30, 1994. However, in July 1994, Tropical Storm Alberto brought record flooding through the Ocmulgee River basin, damaging the weir and delaying the monitoring study. The DO monitoring study continued through 1997, concluding that the weir increased DO levels, but at times was not effective at keeping DO in project releases above the state water quality standard. As a result, Georgia Power proposed to study turbine venting in 1998 as a potential alternative method of increasing DO levels downstream of Lloyd Shoals. From the late 1990s through 2006, turbine venting through a vacuum breaker was used to increase DO levels in tandem with the downstream labyrinth weir. In 2006 and 2007, due to ongoing maintenance issues associated with the labyrinth weir, Georgia Power installed a conventional turbine aeration system in three units, which resulted in positive DO improvements. Georgia Power continued to monitor through 2007, ultimately proposing to remove the weir.

On December 26, 2007, Georgia DNR concurred with the removal of the labyrinth weir. The letter states, "We agree with your assessment that this system increased and stabilized dissolved oxygen levels near or at saturation and that these benefits exceed those attained by the existing aeration weir located immediately below the dam. We also concur with your plans to remove the weir and substitute the draft tube aeration system as the preferred method of improving dissolved oxygen levels in the tailrace..." FERC was notified of the weir removal.

Documentation of compliance with this license article is presented in **Exhibit H Table H34**, titled **Article 401 Dissolved Oxygen Enhancement**, which is included in this Exhibit H.

<u>Article 402</u>. The Licensee shall release from the Lloyd Shoals Dam into the Ocmulgee River a continuous minimum flow of 400 cubic feet per second, or inflow to the project reservoir, whichever is less, as measured at the project's tailrace, for the protection and enhancement of fish and wildlife resources in the Ocmulgee River.

This flow may be temporarily modified if required by operating emergencies beyond the control of the Licensee, and for short periods upon agreement between the Licensee and the Georgia Department of Natural Resources. If the flow is so modified, the Licensee shall notify the Commission as soon as possible, but not later than 10 days after each such incident.

Georgia Power is in compliance with this article. Over the course of the license, Georgia Power has filed eleven reports of deviations from the terms of this article. In order of most common to the least common, the causes of the deviations from article 402 were reported as follows: whole plant or individual unit trips, human error, inadvertent omission of correction factor when correlating unit settings to gage reading, and a computer operator system glitch. Two of the eleven deviations, both attributed to human error, were determined by FERC to be violations of the Lloyd Shoals license.

Documentation of compliance with this license article is presented in **Exhibit H Table H35**, titled **Article 402 Minimum Flows**, which is included in this Exhibit H. Documentation related to each deviation is in Exhibit H Appendix C.

<u>Article 403.</u> The Licensee, after consultation with the Georgia State Historic Preservation Officer (SHPO), shall implement its cultural resources management plan contained its application for license filed December 17, 1991, to avoid or mitigate impacts to archeological and historic sites at the Lloyd Shoals Project eligible for inclusion in the National Register of Historic Places.

The Licensee shall file for Commission approval reports on any cultural resources investigations and any revisions to its cultural resources management plan found necessary in the future to avoid or mitigate impacts to eligible sites at the Project, along with copies of the SHPO's written comments on the investigations, reports, and revisions. Any investigations, reports, and revisions to the plan must be based on the recommendations of the SHPO and adhere to the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservations.

The Licensee shall not implement any revisions to the cultural resources management plan or begin any land-clearing or land-disturbing activities that may have an effect on National Register eligible sites until informed by the Commission that the requirements discussed above have been fulfilled. The Commission reserves the right to require additional investigations and revisions to the reports or to the plan based on these filings.

On February 14, 1996, FERC issued an Order Amending Article 403 to incorporate an executed Programmatic Agreement for managing historic properties in the Project. The new article language read, "The licensee shall implement the Programmatic Agreement (PA) among the Federal Regulatory Commission, the Advisory Council on Historic Preservation and the Georgia State Historic Preservation Officer (SHPO) For Managing Historic Properties that May Be Affected By An Amended License Issued to Georgia Power Company for the Continued Operation of the Lloyd Shoals Project executed on January 18, 1996. The licensee shall file, with the Commission and the SHPO, on every anniversary of the license issuance date, annual reports of activities undertaken pursuant to the PA.

(A) In the event the PA is terminated pursuant to Stipulation III B. of the document, the licensee shall continue to implement the cultural resource management plant (CRMP. IN addition, the licensee must file, for Commission approval, revisions to the CRMP along with comments from SHPO if available.

Georgia Power has been diligent about ensuring that land disturbing activities are evaluated for their impact on previously unidentified cultural resources. Where historic or cultural resources that have been identified receive protection under the PA, Georgia Power has maintained and monitored the resources on an ongoing and periodic basis so as to protect their integrity.

Documentation of compliance with this license article is presented in **Exhibit H Table H36**, titled **Article 403 Cultural Resources Management Plan.**

<u>Article 404</u>. The Licensee shall implement the recreation and land use enhancement measures filed on December 17, 1991 (exhibit E sections 4.51.f.5 and 6) and July 31, 1992 (additional information response to item number 1, pages 1-4).

The recreation and land use enhancements consist of: (1) a new boat ramp, parking lot, and associated facilities downstream of the dam and upstream of Highway 16, on the east bank of the river; (2) a barrier free access area for bank fishing downstream of the oxygenation weir on the west bank of the river; (3) monitoring the proposed fishing area downstream of the dam for three years to determine whether or not the proposed facilities meet current demand or whether changes need to be made; (4) developing the existing boat launching facilities at Lloyd Shoals Park, as well as the proposed boat ramp upstream of Highway 16, to accommodate disabled users; (5) extending one of the two boat ramps at Lloyd Shoals Park to allow access during low-water periods; (6) developing a litter control plan for the Lloyd Shoals Project; and (7) developing policies for the removal of stumps and deadfalls and the re-introduction of native vegetation along Lake Jackson's shoreline. The Licensee shall complete construction of the recreational facilities described above within two years from the effective date of the license. Within 90 days after finishing construction, the Licensee shall file for Commission approval revised exhibits A, F, and G to describe the recreational facilities asbuilt.

On November 15, 2016, FERC issued an Order Amending Recreation Plan to relocate the existing accessible ramp to the fishing pier from the upstream end to the downstream end to help avoid concerns over public safety and security around the powerhouse while also improving accessibility along the entire tailrace pier. The amendment order included the following provisions,

(A) Georgia Power Company's amendment to the recreation plan for the Lloyd Shoals Hydroelectric Project (FERC No. 2336), filed October 14, 2016, is approved.

(B) Georgia Power Company must file, for Commission approval, as-built site plan drawings within 6 months of completing construction at the Lloyd Shoals Tailrace Fishing Pier. An overall site plan drawing that includes the location of all Commission approved recreation sites in relation to the project boundary and a three-column table is required. In addition to the overall site plan drawing, the licensee must file as-built site plan drawings for each recreation site showing the location of all recreation facilities in relation to the project boundary. The first column of the three-column table on the overall site plan drawing must be titled "Identification" and must key each recreation site to the location on the drawing. The second column must be titled "Exhibit No." and must include the Commission assigned Exhibit Numbers for any previously approved as-built site plan drawings and left blank for the current filing until provided in an approval order. The third column must be titled

"Recreation Site Name." Each drawing must include a north arrow, scale (graphic and numeric), and Title Block. The Title Block must include the Project Name, Project Number, a space for Exhibit Number (Commission assigned upon approval), a space for Drawing Number (Commission assigned upon approval) and drawing name. All drawings must be legible when reduced to or printed on 11"x17" paper size. For additional guidance, please see:

https://www.ferc.gov/industries/hydropower/gen-info/guidelines/as-built-site-plan.pdf.

(C) Within 45 days of the issuance of this order, the licensee shall review the attribute table in Appendix A of this order. If the licensee concurs with the information shown in the table, the licensee must file the completed table with the Commission, including location information. If the licensee does not concur with the information provided in the table, the licensee must file a revised table, including location information. The table must be filed in one of the following file formats: .xls, .csv, or .dbf.

On March 7, 2017, FERC issued an Order Amending Recreation Plan approving the closing of Riverside Park to public access and improvements to bank fishing access to an area at the south end of the emergency spillway, the Jane Lofton Bank Fishing Site. The amendment order including the following provisions,

(A) Georgia Power Company's November 11, 2016, request to amend the recreation plan for the Lloyd Shoals Hydroelectric Project (FERC No. 2336) is approved.

(B) Georgia Power Company must file, for Commission approval, as-built site plan drawings within 6 months of completing construction of the Lloyd Shoals Tailrace Fishing Pier. An overall site plan drawing that includes the location of all Commission approved recreation sites in relation to the project boundary and a three-column table is required. In addition to the overall site plan drawing, the licensee must file as-built site plan drawings for each recreation site (except Ocmulgee River Park, Exhibit R-3, FERC Drawing No. 2336-52) showing the location of all recreation facilities in relation to the project boundary. The first column of the three-column table on the overall site plan drawing must be titled "Identification" and must key each recreation site to the location on the drawing. The second column must be titled "Exhibit No." and must include the Commission assigned Exhibit Numbers for any previously approved as-built site plan drawings and left blank for the current filing until provided in an approval order. The third column must be titled "Recreation Site Name." Each drawing must include a north arrow, scale (graphic and numeric), and Title Block. The Title Block must include the Project Name, Project Number, a space for Exhibit Number (Commission assigned upon approval), a space for Drawing Number (Commission assigned upon approval), and drawing name. All drawings must be legible when reduced to or printed on 11"x17"paper size. For additional guidance, please see:https://www.ferc.gov/industries/hydropower/gen-info/guidelines/as-built-site-plan.pdf.

(C)Within 45 days of the issuance of this order, the licensee shall review the attribute table in Appendix A of this order. If the licensee concurs with the information shown in the table, the licensee must file the completed table with the Commission, including location information. If the licensee does not concur with the information provided in the table, the licensee must file a revised table, including location information. The table must be filed in one of the following file formats: .xls, .csv, or .dbf.

Georgia Power is in compliance with this article.

Georgia Power owns and operates four project recreational facilities which provide for a variety of recreation opportunities. Two of the facilities are on Lake Jackson and two are located adjacent to the Ocmulgee River on the east and west shoreline of the tailrace area. As modifications were needed, Georgia Power consulted with resource agencies and received FERC approval prior to implementing modifications. Following construction completion, project exhibits were updated in accordance with FERC's orders.

Documentation of compliance with this license article is presented in **Exhibit H Table H37**, titled **Article 404 Recreation and Land Use Enhancement Measures.**

<u>Article 405</u>. The Licensee, after consultation with the National Park Service and the Georgia Department of Natural Resources, shall monitor recreation use at the project to determine whether existing recreation facilities are meeting recreation needs. Monitoring studies shall begin within 3 years from the effective date of this license. Monitoring studies, at a minimum, shall consist of collection of annual recreation use data, by activity, including bank fishing, *for a one-calendar-year period*.

Once Every 5 years during the term of the license, the Licensee shall *collect data and* file a report with the Commission on the monitoring results. This report shall include: (1) the annual recreation use figures, by activity; (2) a discussion of the adequacy of the Licensee's recreation facilities at the project site to meet recreation demand; (3) a description of the methodology used to collect all study data; and (4) if there is a need for additional facilities, a recreation plan proposed by the Licensee to accommodate recreation needs in the project area.

The Licensee shall include with the report documentation of consultation, copies of comments and recommendations on the report after it has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments are accommodated by the report. The Licensee shall allow a minimum of 30 days for the agencies to comment and make recommendations before filing the report, and any recreation plan under item (4), with the Commission.

The Commission reserves the right to require changes to any recreation plan. No modification or enhancement activities proposed in the recreation plan shall begin until the Licensee is notified by the Commission that the plan is approved. Upon Commission approval, the Licensee shall implement the recreation plan, including any changes required by the Commission.

On April 22, 1993, FERC issued an Errata Notice affecting Article 405 language as noted in italics above.

On May 17, 2013, FERC issued an Order Amending Article 405 changing the frequency of the Recreation Monitoring Reports from a 5-year frequency to a 6-year frequency, effectively aligning the Recreation Monitoring Report requirement of Article 405 with the 6-year FERC Form 80 Report. The amendment order included the following provisions.

(A) Georgia Power Company's application, filed on March 8, 2013, to modify the requirements of Article 405 of the license for the Lloyd Shoals Hydroelectric Project (FERC No. 2633), as modified by ordering paragraph (B) below, is approved.

(B) The licensee shall file with the Commission the recreation monitoring report, as required by article 405, every six years in conjunction with the FERC Form 80, beginning in 2015. The recreation monitoring report shall include: (1) annual recreation use figures by activity; (2) a discussion of the adequacy of the licensee's recreation facilities at the project site to meet recreation demand; (3) a description of the methods used to collect study data; and (4) if there is a need for additional facilities, a recreation plan proposed by the licensee to accommodate the recreation needs in the project area. The licensee shall prepare the summary report after consultation with the Georgia Department of Natural Resources and the National Park Service. The licensee shall include with the report documentation of consultation, copies of comments and recommendations on the report and specific descriptions of how the agencies' comments are accommodated in the report. The licensee shall allow a minimum of thirty days for the agencies to comment and to make recommendations prior to filing the report and any recreation plan with the Commission. The next recreation monitoring report shall be due April 1, 2015.

Georgia Power is in compliance with this article. Recreation Monitoring Reports have been filed four times, in 1998, 2003, 2009 and 2015 since the issuance of the license. In addition, Georgia Power has filed FERC Form 80s with FERC on a six-year basis through June 1, 2015. FERC Form 80s provide FERC with information on recreational resources at the Project. On December 28, 2018, FERC Order 852 was issued, effectively eliminating the requirement for licensees to conduct Form 80 reports. A summary of documentation of compliance with FERC Form 80s and Recreation Use Monitoring Reports is included under Article 405.

Documentation of compliance with this license article is presented in **Exhibit H Table H38**, titled **Article 405 Recreation Use Monitoring.**

<u>Article 501.</u> If the Licensee's project was directly benefited by the construction work of another Licensee, a permittee, or the United States on a storage reservoir or other headwater improvement during the term of the original license (including extensions of that term by annual licenses), and if those headwater benefits were not previously assessed and reimbursed to the owner of the headwater improvement, the Licensee shall reimburse the owner of the headwater improvement for those benefits, at such time as they are assessed, in the same manner as for benefits received during the term of this new license.

Georgia Power is in compliance with this article.

There are no storage reservoirs upstream of the Lloyd Shoals Project and no headwater benefits have been assessed.

In addition to the requirements of the license as outlined in the license articles, Georgia Power also complies with other regulatory commitments. The following is a listing of some of the more common of these and Georgia Power's documentation of meeting these commitments.

Owners Dam Safety Program (OSDP) Submittals [18 CFR 12.4(b)(2)(ii)]

Documentation of compliance with this regulatory requirement is presented in **Exhibit H Table H39**, titled **Owners Dam Safety Program (ODSP) Submittals [18 CFR 12.4(b)(2)(ii)]**, which is included in this Exhibit H.

Deaths or Serious Injuries 18 CFR 12.10

Documentation of compliance with this regulatory requirement is presented in **Exhibit H Table H40**, titled **Reported Fatalities and Injuries of Project Users 18 CFR 12.10**, which is included in this Exhibit H.

Emergency Action Plans, Exercises, Status Reports, and Updates (18 CFR 12.20 to 12.25)

Documentation of compliance with these regulatory requirements is presented in **Exhibit H Table H41**, titled **Emergency Action Plans, Exercises, Status Reports, and Updates (18 CFR 12.20 to 12.25)**, which is included in this Exhibit H.

5 Year Inspections and Corrective Actions (18 CFR 12.30 to 12.39)

Documentation of compliance with these regulatory requirements is presented in **Exhibit H Table H42**, titled **5 Year Inspections and Corrective Actions (18 CFR 12.30 to 12.39)**, which is included in this Exhibit H.

Annual Dam Safety Surveillance Monitoring Plan and Reports (18 CFR 12.41)

Documentation of compliance with this regulatory requirement is presented in **Exhibit H Table H43**, titled **Annual Dam Safety Surveillance Monitoring Plan and Reports (18 CFR 12.41)**, which is included in this Exhibit H.

Public Safety Related (18 CFR 12.42)

Documentation of compliance with this regulatory requirement is presented in **Exhibit H Table H44**, titled **Public Safety Related (18 CFR 12.42)**, which is included in this Exhibit H.

Annual Spillway Gate Certifications (18 CFR 12.44)

Documentation of compliance with this regulatory requirement is presented in **Exhibit H Table H45**, titled **Annual Spillway Gate Certifications (18 CFR 12.44)**, which is included in this Exhibit H.

Security Submittals

Documentation of compliance with FERC security initiatives and directives is presented in **Exhibit H Table H46**, titled **Security Submittals**, which is included in this Exhibit H.

18 CFR 5.18(c)(1)(ii)(G) A discussion of any actions taken by the existing licensee related to the project which affect the public.

The following is a list of actions that Georgia Power has taken which affect the public.

- 1. Georgia Power has provided funding to several local organizations involved in public safety, community recreation, environmental education, and river protection.
- 2. Georgia Power has maintained buoys in the reservoir and tailrace to enhance public safety. This has been done in coordination with the Georgia Department of Natural Resources. The buoys are paid for and placed by Georgia Power.
- 3. Georgia Power periodically conducts tours of the hydro facilities for school, civic, and governmental groups.
- 4. Georgia Power has worked with the Georgia Department of Natural Resources to enhance the fishery in the project waters, including installing fish attracting structures in the reservoir and participating in the Candidate Conservation Agreement with Assurances for the robust redhorse and the Altamaha Candidate Conservation Agreement for mollusks.
- 5. Georgia Power has helped sponsor and participated in annual clean up in the project area.
- 6. Georgia Power owns and operates four project recreation sites within the project boundary: Lloyd Shoals Park; Jane Lofton Bank Fishing Area; Lloyd Shoals Tailrace Fishing Pier; and the Ocmulgee River Park. These project recreation sites provide a variety of recreational opportunities, including total of two boat ramps (3 lanes), one swimming beach, two barrier free fishing piers, bank fishing areas, as well as associated amenities such as a comfort station, picnic areas, a playground, and approximately 75+ parking slots.
- 7. In a limited number of shallow areas of the reservoir, Georgia Power treats targeted invasive species with herbicide treatments on an as needed basis.

- 8. Lake Jackson supports a popular fishery for Largemouth Bass, Spotted Bass, hybrid bass, Striped Bass, Channel Catfish and Blue Catfish, Black Crappie, and other sunfishes. Tournament fishing is popular and primarily targets Black Bass, Largemouth Bass and Spotted Bass. GDNR stocks both Striped Bass and hybrid bass into Lake Jackson to provide an additional sportfish option.
- 9. Georgia Power works cooperatively with GDNR to conduct bald eagle nest monitoring and management. Another environmental initiative that has been implemented in recent years, not in coordination with environmental resource agencies, but supportive of common agency conservation objectives, is the installation of pollinator habitat on project lands.
- 10. Georgia Power maintains a boathouse on Lake Jackson west of the powerhouse for use by GDNR Law Enforcement, Butts County Sherriff's Department and Georgia Power Lake Resources management to facilitate lake patrols.
- 11. Georgia Power manages shorelines in accordance with Shoreline Management Guidelines for Georgia Power Lakes and to promote the maintenance of vegetative buffers around the reservoir to protect water quality, aquatic habitat, and cultural and aesthetic resources.
- 12. Georgia Power provides public safety programs on boating and water safety to several area schools annually.

18 CFR 5.18(c)(1)(ii)(H) A summary of the ownership and operating expenses that would be reduced if the project license were transferred from the existing licensee.

Georgia Power incurs certain costs associated with owning and operating the Lloyd Shoals Project. If the existing license for the Project were transferred to another entity, some of these costs would no longer be the responsibility of Georgia Power and this would reduce the company's overall expenses. The project power would still have to be replaced. This would result in additional ownership and operating expenses.

Table H3, titled Estimated Annual Cost of Lloyd Shoals Project for 40 Years (Incremental Cost Only), lists the ownership and operating costs associated with the Lloyd Shoals Project which would be reduced if the license were lost. Table H4 (titled Estimated Annual Cost of CT Capacity to Replace the Lloyd Shoals Project for 40 years) list the ownership and operating costs associated with replacement power from the most economical alternative, Combustion Turbine units. As was mentioned in sections 18 CFR 5.18(c)(1)(i)(B)(1) and 18 CFR 5.18(c)(1)(i)(B)(2), the replacement alternative is not as cost-effective as the existing Project.

18 CFR 5.18(c)(1)(ii)(I) A statement of annual fees paid under Part I of the Federal Power Act for the use of any Federal or Indian lands included within the project boundary.

There are no Federal or Indian Lands within the project boundary. This section is not applicable.

18 CFR 5.18(c)(1)(iii) Information to be provided by an applicant who is not an existing licensee. An applicant that is not an existing licensee must provide:

Georgia Power is the existing licensee for the Project. As such, this section is not applicable.

18 CFR 5.18(c)(1)(iii)(A) The information specified in paragraph (c)(1) of this section.

Georgia Power is the existing licensee for the Project. As such, this section is not applicable.

18 CFR 5.18(c)(1)(iii)(B) A statement of the applicant's plans to manage, operate, and maintain the project safely including:

Georgia Power is the existing licensee for the Project. As such, this section is not applicable.

18 CFR 5.18(c)(1)(iii)(B)(1) A description of the differences between the operation and maintenance procedures planned by the applicant and the operation and maintenance procedures of the existing licensee;

Georgia Power is the existing licensee for the Project. As such, this section is not applicable.

18 CFR 5.18(c)(1)(iii)(B)(2) A discussion of any measures proposed by the applicant to implement the existing licensee's Emergency Action Plan, as described in subpart C of Part 12 of this chapter, and any proposed changes.

Georgia Power is the existing licensee for the Project. As such, this section is not applicable.

18 CFR 5.18(c)(1)(iii)(B)(3) A description of the applicant's plans to continue safety monitoring of existing project instrumentation and any proposed changes; and

Georgia Power is the existing licensee for the Project. As such, this section is not applicable.

18 CFR 5.18(c)(1)(iii)(B)(4) A statement indicating whether or not the applicant is requesting the licensee to provide transmission services under section 15(d) of the Federal Power Act.

Georgia Power is the existing licensee for the Project. As such, this section is not applicable.

Summary Table Locations of Figures and Tables

Figures Locations

Figure Number	<u>Title</u>	Location
H1	Lake Jackson Drawdown in Current & Recent	Exhibit H
	Droughts	
H2	Load and Capability Comparison Georgia Power	Exhibit H Appendix B
	Company All Capacity	
H3	Capacity Distribution By Type Georgia Power	Exhibit H Appendix B
	Company Percent of Total Capacity	
H4	Capacity Distribution By Type Georgia Power	Exhibit H Appendix B
	Company Percent of Total Energy	
H5	Single Line Drawing of Georgia Integrated	Exhibit H Appendix A
	Transmission System Lloyd Shoals Hydro Substation	
H6	Single Line Drawing of Georgia Integrated	Exhibit H Appendix A
	Transmission System Lloyd Shoals Substation	
H7	Lloyd Shoals Public Safety Plan	Exhibit H Appendix A

Tables Locations

Table Number	Title	Location
H1	Comparison of Replacement Alternative and Lloyd Shoals Hydro Project Cost	Exhibit H Appendix B
H2	Comparison of Replacement Alternative and Lloyd Shoals Project Costs for 40 years (Thousands of Dollars)	Exhibit H Appendix B
Н3	Estimated Annual Cost of the Lloyd Shoals Project for 40 years (Incremental Cost only)	Exhibit H Appendix B
H4	Estimated Annual Cost of CT Capacity to Replace the Lloyd Shoals Project for 40 years	Exhibit H Appendix B
H5	Comparison of Replacement Alternative and Lloyd Shoals Project Costs for 50 years (Thousands of Dollars)	Exhibit H Appendix B
H6	Estimated Annual Cost of the Lloyd Shoals Project for 50 Years (Incremental Cost only)	Exhibit H Appendix B
H7	Estimated Annual Cost of CT Capacity to Replace the Lloyd Shoals Project for 50 years	Exhibit H Appendix B
H8	Accumulated Present Value for Cost Categories for Alternatives for 40 Years	Exhibit H Appendix B
H9	Accumulated Present Value for Cost Categories for Alternatives for 50 Years	Exhibit H Appendix B
H10	Load and Capacity Comparison (MW) All Capacity	Exhibit H Appendix B
H11	Capacity Distribution By Type Georgia Power Company Percent of Total Capacity	Exhibit H Appendix B
H12	Capacity Distribution By Type Georgia Power Company Percent of Total Energy	Exhibit H Appendix B
H13	Characteristics of Alternative Generation Lloyd Shoals Dam Hydro Project	Exhibit H Appendix B
H14	Summary Information for Warning Signs at Lloyd Shoals	Exhibit H
H15	Upstream and Downstream Warnings at Lloyd Shoals	Exhibit H
H16	Summary Information for Sirens at Lloyd Shoals	Exhibit H
H17	Summary Information for Security and Warning Lights at Lloyd Shoals	Exhibit H
H18	Reported Fatalities and Injuries of Project Users	Exhibit H
H19	Forced Outages Information	Exhibit H
H20	Article 1 General License Compliance	Exhibit H
H21	Article 2 General Conformity to Exhibits	Exhibit H

Table Number	Title	Location
H22	Article 3 Exhibits, Plans, and Drawings Compliance	Exhibit H
H23	Article 4 Project Inspections and Submittals	Exhibit H
H24	Article 5 Acquisition of Lands and Rights of Use	Exhibit H
H25	Article 8 USGS Gages and Plant Electrical Gages	Exhibit H
H26	Article 12 Prescription of Rules for Protection of Life, Health, and Property	Exhibit H
H27	Article 13 Comprehensive Development of Waterway	Exhibit H
H28	Article 14 Power and Communication Lines	Exhibit H
H29	Article 15 Commission Ordered Enhancements to Fish and Wildlife Resources	Exhibit H
H30	Article 18 Public Access and Recreation	Exhibit H
H31	Article 19 Pollution Prevention	Exhibit H
H32	Article 201 Annual Administrative Charges	Exhibit H
H33	Article 203 Standard Land Use Article	Exhibit H
H34	Article 401 Dissolved Oxygen Enhancement	Exhibit H
H35	Article 402 Minimum Flows	Exhibit H
H36	Article 403 Cultural Resources Management Plan	Exhibit H
H37	Article 404 Recreation and Land Use Enhancement Measures	Exhibit H
H38	Article 405 Recreation Use Monitoring	Exhibit H
H39	Owners Dam Safety Program (ODSP) Submittals	Exhibit H
H40	Reported Fatalities and Injuries of Project Users	Exhibit H
H41	Emergency Action Plans, Exercises, Status Reports, and Updates	Exhibit H
H42	5 Year Inspections and Corrective Actions	Exhibit H
H43	Annual Dam Safety Surveillance Monitoring Plan and Reports	Exhibit H
H44	Public Safety Related	Exhibit H
H45	Annual Spillway Gate Certifications	Exhibit H
H46	Security Submittals	Exhibit H

Table H19 Forced Outage Information

Unit	Start Time	End Time	Event Length	Capacity Reduction	Generation Loss	Description
1	12/26/2015 06:04	01/04/2016 12:00	221.9	100	443.9	FLOOD; HIGH FLOW EVENT CAUSING WATER IN GEN PIT TRIPPING UNIT.
1	03/20/2018 15:54	2018 03/20/2018 16:08		100	0.5	GENERATOR NEUTRAL GROUNDING EQUIPMENT; UNIT 3 NEUTRAL GROUND OVER VOLTAGE RELAY OPERATED.
1	05/01/2018 02:16			100	5.9	OTHER SWITCHYARD EQUIPMENT-EXTERNAL (OMC); A SNAKE GROUNDED ONE PHASE OF DISCONNECT 031417 CAUSING BKRS 031416 & 031426 TO TRIP.
1	04/20/2019 04/22/2019 08:20 09:55		49.6	100	99.2	GENERATOR MAIN LEADS; WATER BACKEDUP INTO GEN PIT FROM HIGH INFLOW. WATER REACHED GEN LEADS CAUSING FAULT.
1	03/04/2020 09:57	06/01/2020 09:21	2134.4	100	4268.8	STATOR WINDINGS; GENERATOR WINDING FAILURE.
1	09/21/2020 10:56	09/22/2020 07:43	20.8	100	41.6	OTHER HYDRO PROBLEMS; GENERATOR BUS NO. 1 TRIP DUE TO HIGH WATER LEVEL IN SUMP FROM PLUGGED DRAIN
1	10/14/2020 09:46	10/15/2020 09:01	23.3	100	46.5	OTHER HYDRO PROBLEMS; UNIT 1 COOLING WATER DRAIN PIPING STOPPED UP AND BACKED UP INTO UNIT 1 GENERATOR LEADS
2	12/26/2015 05:47	01/04/2016 13:00	223.2	100	446.4	FLOOD; HIGH FLOW EVENT CAUSING WATER IN GEN PIT TRIPPING UNIT.
2	01/05/201601/25/2016484.910005:3510:30100		969.8	BEARINGS; WIPED UPSTREAM TURBINE BEARING.		
2	01/25/2016 12:04	01/25/2016 13:40	1.6	100	3.2	VIBRATION (ONLY FOR UNBALANCENOT BEARING FAILURE; HIGH VIBRATION ON TURBINE THRUST BRG FAULTY INSTRUMENT

2	02/02/2016 03:54	02/02/2016 06:45	2.9	100	5.7	OTHER HYDRO PROBLEMS; TRIPPED ON FALSE TURBINE OVERSPEED DETECTION.
2	09/10/2017 10:57	09/10/2017 18:56	8.0	100	16.0	TURBINE GOVERNOR; UNIT TRIPPED ON BAD OIL LEVEL SWITCH IN HPU.
2	09/12/2017 08:45	10/19/2017 06:00	885.3	100	1770.5	BEARINGS; WIPED UPSTREAM (THRUST) TURBINE BEARING.
2	10/19/2017 06:55	10/19/2017 10:00	3.1	100	6.2	BEARINGS; MAKING ADJUSTMENT ON NEW THRUST BEARING.
2	10/19/2017 12:25	10/26/2017 12:30	168.1	100	336.2	BEARINGS; FURTHER INSPECTION AND ADJUSTMENT OF NEW THRUST BEARING
2	03/20/2018 14:54	03/20/2018 16:11	1.3	100	2.6	GENERATOR NEUTRAL GROUNDING EQUIPMENT; UNIT 3 NEUTRAL GROUND OVER VOLTAGE RELAY OPERATED.
2	05/01/2018 02:16	05/01/2018 05:18	3.0	100	6.1	OTHER SWITCHYARD EQUIPMENT-EXTERNAL (OMC); A SNAKE GROUNDED ONE PHASE OF DISCONNECT 031417 CAUSING BKRS 031416 & 031426 TO TRIP.
2	03/21/2019 10:30	03/21/2019 11:10	0.7	100	1.3	MAINTENANCE PERSONNEL ERROR; WHILE TROUBLESHOOTING A GATE POSITION METERING PROBLEM I & C TECH CAUSED HPU TO TRIP.
2	04/20/2019 08:20	04/20/2019 09:50	1.5	100	3.0	PROTECTION DEVICES; FAULT ON UNIT 1 CAUSED PROTECTIVE RELAYING TO CLEAR BUSS ONE. SEE UNIT 1 EVENT 2.
2	09/21/2020 10:56	09/21/2020 12:46	1.8	100	3.7	OTHER HYDRO PROBLEMS; GENERATOR BUS NO. 1 TRIP DUE TO HIGH WATER LEVEL IN SUMP FROM PLUGGED DRAIN
2	10/14/2020 09:46	10/14/2020 10:18	0.5	100	1.1	OTHER HYDRO PROBLEMS; UNIT 1 GEN. LEADS GOT WET, GROUNDED OUT AND TRIPPED BUS NO. 1.
3	12/26/2015 06:14	01/04/2016 12:10	222.0	100	443.8	FLOOD; HIGH FLOW EVENT CAUSING WATER IN GEN PIT TRIPPING UNIT.

3	03/15/2016 16:57	03/15/2016 20:45	3.8	100	7.6	GOVERNOR OIL SYSTEM; UNIT TRIPPED ON FAULTY OIL RESERVIOR LEVEL FLOAT SWITCH.
3	04/29/2016 09:00			100	49.8	GENERATOR BEARINGS AND LUBE OIL SYSTEM (INCLUDING THRUST BEARINGS ON HYDRO UNITS); OPERATOR MAKING ROUTINE ROUNDS FOUND OIL SLINGER RING ON UPSTREAM GEN BRG NOT TURNING.
3	03/20/2018 14:54	02/11/2019 07:40	7865.8	100	15731.5	SHAFT; TURBINE SHAFT BROKE.
3	04/20/2019 08:20	/2019 04/20/2019 10:00		100	3.3	PROTECTION DEVICES; FAULT ON UNIT 1 CAUSED PROTECTIVE RELAYING TO CLEAR BUSS ONE. SEE UNIT 1 EVENT 2.
3	07/20/2019 02:25	25 03:40		100	2.5	OTHER TURBINE CONTROLS; HPU HAD PHANTM LOW OIL PRESSURE TRIP.
3	09/21/2019 07:01	09/21/2019 11:42	4.7	100	9.4	OTHER TURBINE CONTROLS; FALSE OVERSPEED TRIP. FAULTY TRANSDUCER.
3	09/22/2019 06:08	09/23/2019 10:18	28.2	100	56.3	OTHER TURBINE CONTROLS; FALSE OVERSPEED TRIP. FAULTY TRANSDUCER
3	09/07/2020 05:20	09/10/2020 00:00	66.7	100	133.3	BEARINGS; UPSTREAM TURBINE BEARING PACKING FAILURE.
3	09/21/2020 10:56	09/21/2020 12:38	1.7	100	3.4	OTHER HYDRO PROBLEMS; GENERATOR BUS NO. 1 TRIP DUE TO HIGH WATER LEVEL IN SUMP FROM PLUGGED DRAIN
3	10/14/2020 09:46	10/14/2020 10:25	0.7	100	1.3	OTHER HYDRO PROBLEMS; UNIT 1 GEN. LEADS GOT WET, GROUNDED OUT AND TRIPPED BUS NO. 1.
4	01/04/2016 12:15	01/04/2016 12:30	0.3	100	0.5	EMERGENCY GENERATOR TRIP DEVICES; NEUTRAL GRND OVERVOLTAGE RELAY OPERATED DUE TO BAD LIGHTNING ARRESTOR ON UNIT 6.
4	05/01/2018 02:16	05/01/2018 05:11	2.9	100	5.8	OTHER SWITCHYARD EQUIPMENT-EXTERNAL (OMC); A SNAKE GROUNDED ONE PHASE OF DISCONNECT 031417 CAUSING BKRS 031416 & 031426 TO TRIP.

4	02/05/2019 11:54	02/06/2019 10:22	22.5	100	44.9	VIBRATION (ONLY FOR UNBALANCENOT BEARING FAILURE; UNIT SHUT DOWN FOR TURBINE VIBRATION.
5	12/07/2015 07:35	08/19/2016 09:35	6145.0	100	12290.0	SHAFT; BROKEN TURBINE SHAFT.
5	05/01/2018 02:16	05/01/2018 05:22	3.1	100	6.2	OTHER SWITCHYARD EQUIPMENT-EXTERNAL (OMC); A SNAKE GROUNDED ONE PHASE OF DISCONNECT 031417 CAUSING BKRS 031416 & 031426 TO TRIP.
5	08/01/2018 15:14	08/22/2018 14:00	502.8	100	1005.5	PROGRAMMABLE LOGIC CONTROLLER (PLC); INTERNAL FAULT(S) IN SCADA PLC SYSTEM CAUSED MALFUNCTION WHICH TRIPPED UNIT.
6	12/26/2015 07:44	01/04/2016 14:15	222.6	100	445.0	FLOOD; HIGH FLOW EVENT CAUSING WATER IN GEN PIT TRIPPING UNIT.
6	09/30/2016 04:46	09/30/2016 07:44	3.0	100	5.9	OTHER TURBINE CONTROLS; UNIT TRIPPED ON FAULTY OVERSPEED TRANSDUCER OUTPUT.
6	08/24/2018 08:20	08/24/2018 10:30	2.2	100	4.3	OTHER TURBINE PROBLEMS; A HOLE IN THE HEADCOVER NEEDED TO BE REPAIRED
6	11/19/2018 14:55	02/21/2019 10:00	2251.1	100	4502.2	VIBRATION (ONLY FOR UNBALANCENOT BEARING FAILURE; UNIT TAKEN OFF MANUALLY DUE TO HIGH VIBRATION AT TURBINE THRUST BRG END.
6	04/09/2019 12:35	10/10/2019 10:30	4413.9	100	8827.8	SHAFT; UNIT HAS BROKEN UPSTREAM STUB SHAFT.

Table H20 Article 1 General License Compliance

Document Date	From	То	Article 1 Subject
3/29/1993	FERC	GPC	Order Issuing New License
6/9/1993	FERC	GPC	License Compliance Guidelines
12/30/1993	FERC	GPC	Compliance Requirements and HLCTS Output
6/8/1994	FERC	GPC	Filing Requirements
9/6/1995	GPC	FERC	Outages Due To Flood
2/6/1996	FERC	GPC	Annual Compliance Letter
1/21/1997	FERC	GPC	Advises Georgia Power that RW Crisp has retired as ARO Director & to make pen & ink deletion of his name etc. from copies of EAP notification list for P-485 et al & when position is filled GA Power will be informed.
5/15/1997	FERC	GPC	Annual Compliance Letter
12/22/1998	FERC	Licensees	Mass mailing re FERC Atlanta Regional Office's new telephone number for EAP under P-11286 et al.
11/30/1999	FERC	GPC	Y2K Readiness
12/18/2000	FERC	GPC	Annual Compliance Letter
2/23/2001	GPC	FERC	Designated Corporate Official to Receive Services
7/17/2001	FERC	Licensees	New FERC Deputy Regional Director
3/7/2003	FERC	Licensees	Annual Compliance Letter
2/13/2004	FERC	SCG	Annual Compliance Letter
9/26/2004	SCG	FERC	Update of Names on Service List
2/14/2005	FERC	Licensees	Annual Compliance Letter
3/30/2005	SCG	FERC	Request to change the corporate official
3/1/2006	FERC	Licensees	Annual Compliance Letter
3/17/2006	SCG	FERC	Acknowledgement of Receipt of Annual Letter
2/6/2007	FERC	Licensees	Change in FERC ARO Management Staff
3/15/2007	FERC	Licensees	Annual Compliance Letter
10/10/2008	FERC	Licensees	Change in ARO Management and Address

Document Date	From	То	Article 1 Subject
10/26/2010	FERC	SCG	Meeting Invite Re. Resolution of Outstanding Compliance Items
11/6/2013	SCG	FERC	Updated Contact Information
12/11/2014	FERC	SCG	Annual Compliance Letter
2/10/2016	FERC	Licensees	Notice of License Expiration and Requesting Information RE Process Selection
3/1/2017	FERC	Licensees	Annual Compliance Letter
3/9/2017	SCG	FERC	Certification of Annual Compliance Letter
8/29/2018	FERC	SCG	Annual Compliance Letter
9/10/2018	SCG	FERC	Acknowledgement of Annual Letter
2/18/2020	FERC	SCG	Annual Compliance Letter

Table H21 Article 2 General Conformity to Exhibits

Document Date	From	То	Article 2 Subject
10/22/1993	FERC	GPC	Accept Revised Public Safety Plans
11/8/1993	GPC	FERC	Compliance with Article 404, Revised Exhibits A, E, F and G
6/21/1994	GPC	FERC	Notice of Completion of Protective Measures for South Saddle Dike Pipe
1/5/1995	GPC	FERC	Public Safety Plan
2/9/1995	FERC	GPC	Order Accepting Public Safety Plans
4/29/1995	GPC	FERC	Notice of Completion of Installation of Dam Deformation Monuments
2/1/2001	FERC	GPC	Designated Corporate Official to Receive Services
4/9/2002	GPC	FERC	Application for Non-Power Capacity Amendment of the LS Project Boundary
7/20/2006	SCG	FERC	Notice of Intent to Replace Existing Vertical Lift Gate with Bottom Hinged Trash Gate
10/2/2006	FERC	SCG	Acknowledgement of Trash Gate Replacement Letter
12/18/2006	SCG	FERC	Status Update Re. Land Acquisition for Saddle Dikes
2/9/2007	SCG	FERC	Status Update Re. Land Acquisition and Construction Schedule for Saddle Dikes
5/24/2007	SCG	FERC	Saddle Dike Proposed Investigation Drawing Submittal
8/16/2007	FERC	SCG	FERC Acceptance of Saddle Dike Proposed Investigation Drawing Submittal
2/12/2008	SCG	FERC	Milestone Schedule for Construction of Saddle Dike
3/13/2008	SCG	FERC	Saddle Dike Construction Status Update
4/30/2008	FERC	SCG	Acceptance of Milestone Schedule for Construction of Saddle Dike
6/16/2008	SCG	FERC	Saddle Dike Construction Status Update
7/3/2008	SCG	FERC	Notification of Oxygenation Weir Removal
8/29/2008	FERC	SCG	Acceptance of Saddle Dike Construction Status Update
7/11/2011	SCG	FERC	NOI To Replace Spillway Flashboards with Obermeyer Spillway Gates
7/28/2011	FERC	SCG	FERC Accepts Plan and Start of Construction with Obermeyer Gates
			FERC Advises Obermeyer Gate Installation Not Approved Until Agency Consultation and
11/16/2011	FERC	SCG	Drawing Review Has Been Completed
11/16/2011	SCG	FERC	Southern Company Submits Drawings and Specifications for the Obermeyer Gates

Document Date	From	То	Article 2 Subject
			Southern Company Requests FERC Concurrence With New Plan and Schedule for the
11/29/2011	SCG	FERC	Installation of Obermeyer Gates
12/1/2011	SCG	FERC	Southern Company Requests FERC Review and Approval of Obermeyer Gate Drawings
12/2/2011	FERC	SCG	FERC Approves New Plan and Schedule for the Installation of Obermeyer Gates
12/15/2011	SCG	FERC	Submittal of Saddle Dike As-built Drawings and Revised Exhibit G Map
1/20/2012	SCG	FERC	Request for Review and Approval of Revised Obermeyer Gate Drawings and Calculations
1/25/2012	FERC	SCG	FERC Accepts Revised Obermeyer Gate Drawings and Calculations
1/27/2012	FERC	n/a	Construction Inspection Report (FERC Record-keeping)
2/29/2012	SCG	FERC	Request for Review and Approval of Revised Obermeyer Gate Drawings and Calculations
5/4/2012	FERC		Construction Inspection Report (FERC Record-keeping)
5/16/2012	FERC	SCG	Extension of Time To Complete Revised Exhibit G Maps
6/4/2012	SCG	FERC	Revised Exhibit G Maps
9/14/2012	SCG	FERC	Proposed Changes to Dam Deformation Survey Frequency and Monument Location
10/19/2012	FERC	SCG	Schedule Test of Obermeyer Gates
			FERC Comments on Proposed Changes to Dam Deformation Survey Frequency and Monument
11/27/2012	FERC	SCG	Location
2/8/2013	FERC	SCG	FERC Accepts the Proposed Dam Deformation Monument Locations and Survey Frequency
3/25/2013	SCG	FERC	Construction Completion Report and Certifications
5/20/2013	FERC	SCG	FERC Accepts SCG's Construction Completion Report and Certification
9/25/2013	SCG	FERC	Request for Approval of Incremental Hydropower Production Tax Credit
12/10/2013	SCG	FERC	Request for Approval of Incremental Hydropower Production Tax Credit
12/13/2013	FERC	SCG	ORDER CERTIFYING INCREMENTAL HYDROPOWER GENERATION For Production Tax Credit
4/24/2014	SCG	FERC	Notice of Intent to Install New Turbine Access Doors
5/8/2014	FERC	SCG	FERC Accepts Proposal to Install New Turbine Access Doors
11/6/2015	SCG	FERC	Courtesy Notification of Upcoming Drawdown

Document Date	From	То	Article 2 Subject
12/17/2015	SCG	FERC	Updated Public Safety Plan
5/10/2016	FERC	SCG	Letter Accepting Updated Public Safety Plans
7/27/2017	GPC	FERC	Request for Approval to Revise the Project Boundary
4/9/2018	SCG	FERC	Courtesy Notification of Upcoming Drawdown
5/15/2018	GPC	FERC	MOU with SHPO for Project Boundary Change
5/22/2018	FERC	SCG	Order Amending Project Boundary
9/27/2018	FERC	SCG	Report of Brush Fire at Emergency Spillway
10/1/2018	SCG	FERC	Construction Completion Report and Certifications - Turbine Access
10/19/2018	FERC	SCG	Acceptance of Construction Completion Report - Turbine Access
11/7/2018	SCG	FERC	Courtesy Notification of Drawdown Extension
3/5/2019	SCG	FERC	Construction Completion Report - Flashboard Repair
3/13/2019	FERC	SCG	FERC acceptance of Construction Completion Report - Flashboard Repair

Table H22 Article 3 Exhibits, Plans, and Drawings Compliance

Document Date	From	То	Article 3 Subject
12/15/2011	SCG	FERC	Submittal of Saddle Dike As-built Drawings and Revised Exhibit G Map
5/22/2018	FERC	SCG	Order Amending Project Boundary
1/27/1994	GPC	FERC	Exhibit F Discussion with FERC
7/29/1994	FERC	GPC	Deadline Extension for Rev License Exhibits A, F and G with Recreation Facilities
11/7/1994	GPC	FERC	Flood Impacts On Generators
3/1/1995	GPC	FERC	As Built and Exhibit G Drawings Pursuant to Article 404
4/17/1995	GPC	FERC	As-built Drawings of the Recreation Facilities - Article 404
			Order Approving Revised License Exhibits A and F, Modifying and Approving Exhibits G and E
5/12/1995	FERC	GPC	as Recreation Exhibits
7/20/1995	GPC	FERC	Filing Exhibit F and R Aperture Cards
1/12/1998	GPC	FERC	Change of Address
4/8/2003	GPC	FERC	Revised Exhibit G Pursuant to July 23, 2003, Order Approving Conveyance of Project Lands
10/6/2006	SCG	FERC	Filing of Trash Gate Design Drawings and Construction Schedule
11/7/2007	SCG	<u>FERC</u>	Saddle Dike Design Drawings and Technical Specifications
1/14/2008	FERC	SCG	FERC Accepts Saddle Dike Design Drawings and Technical Specifications
9/22/2011	SCG	FERC	Revised Exhibit F Drawings
1/12/2012	FERC	SCG	Memo Re Review of As-Built Exhibit F and G Saddle Dike Construction
1/31/2012	FERC	SCG	Deficient Exhibit G Drawings
2/29/2012	SCG	FERC	Revised Exhibit G Map 17A
3/23/2012	FERC	SCG	Exhibit G Map Approval
4/23/2012	GPC	FERC	Revised Exhibit G Maps
4/23/2012	SCG	FERC	Revised Exhibit G Map 17 and Digital Maps
7/10/2012	FERC	SCG	Order Approving Exhibit G Map
7/19/2012	FERC	SCG	Order Approving Revised Exhibit F
8/24/2012	SCG	FERC	Request for Extension of Time to Submit Digital and Microfilm Copies of Revised Exhibit G and F

Document Date	From	То	Article 3 Subject
8/31/2012	FERC	SCG	ORDER GRANTING EXTENSION OF TIME TO FILE Exhibit G and F Drawings
9/11/2012	SCG	FERC	Obermeyer Gate Exhibit F and Certification Status Update
9/12/2012	SCG	FERC	Request for Extension of Time to File Exhibit F Drawings Revised for Obermeyer Gates
9/27/2012	SCG	FERC	Revised Exhibit G and F Maps Digital Files and Aperture Cards
11/2/2012	FERC	SCG	ORDER GRANTING EXTENSION OF TIME TO FILE REVISED EXHIBITS A AND F
11/27/2012	SCG	FERC	Revised Exhibit L and Exhibit A
2/26/2013	SCG	FERC	Request for Extension of Time to File As-built Drawings of Obermeyer Gates
3/7/2013	FERC	SCG	FERC Grants Extension of Time to File As-built Drawings of Obermeyer Gates
4/29/2013	SCG	FERC	Request for Extension of Time to File As-built Drawings of Obermeyer Gates
5/30/2013	FERC	SCG	FERC Grants Extension of Time to File As-built Drawings of Obermeyer Gates
6/27/2013	SCG	FERC	As-built Drawings of the Obermeyer Spillway Gates
7/29/2013	FERC	SCG	Order Approving Revised Exhibit F and Requesting Explanation of Changes to Exhibit A
8/26/2013	FERC	SCG	Approval of Obermeyer Gate As-built Drawings
9/20/2013	SCG	FERC	Request for Extension of Time to File Revised Exhibit A
9/25/2013	SCG	FERC	Explanation of Revised Exhibit A
11/1/2013	SCG	FERC	Exhibit F Aperture Cards
11/4/2013	FERC	SCG	Order Granting Extension of Time to File Obermeyer Gate As-built/Exhibit F Drawings
11/18/2013	SCG	FERC	Revised Exhibit A
12/11/2013	FERC	SCG	ORDER AMENDING LICENSE AND APPROVING REVISED EXHIBIT A
12/12/2017	FERC	SCG	Order Approving As-Built Site Plan Drawings Filed 7/27/2017
7/16/2018	SCG	FERC	Extension of Time To Complete Revised Exhibit G Maps
7/26/2018	FERC	SCG	Order Granting Extension of Time to Complete Revised Exhibit G Maps
10/24/2018	SCG	FERC	Annual Statement of Generation
11/1/2018	SCG	FERC	Extension of Time To Complete Revised Exhibit G Maps
11/9/2018	FERC	SCG	Order Granting Extension of Time to Complete Revised Exhibit G Maps

Document Date	From	То	Article 3 Subject
12/20/2018	GPC	FERC	Request to Amend Exhibit G Maps
3/14/2019	FERC	SCG	Order Approving Exhibit G Maps
4/25/2019	GPC	FERC	Final Exhibit G Drawings

Table H23 Article 4 Project Inspections and Submittals

Document Date	From	То	Article 4 Subject
7/28/1993	FERC	GPC	Annual Inspection Recommendations
8/4/1993	GPC	FERC	Submittal of USGS Gage Data Pursuant to Annual Inspection Recommendation
11/30/1993	GPC	FERC	Close Out Documentation for Annual Inspection Recommendation
2/3/1994	FERC	GPC	Annual Inspection Notification
3/16/1994	FERC	GPC	Environmental and Public Use Inspection Report
5/13/1994	FERC	GPC	Annual Inspection Recommendations
6/24/1994	GPC	FERC	Annual FERC Inspection Recommendations Update
7/1/1994	FERC	GPC	Provide Status Report on Inspection and Maintenance of Penstocks
2/24/1995	GPC	FERC	Request for Missing Annual and Construction Inspection Reports
6/23/1995	FERC	GPC	Annual Inspection Notification
8/9/1995	FERC	GPC	Annual Inspection Recommendations
9/6/1995	GPC	FERC	Annual Inspection Recommendations Corrective Actions Plan and Schedule
10/17/1995	GPC	FERC	Annual Inspection Recommendations Corrective Actions Plan and Schedule Update
4/4/1996	FERC	GPC	Schedule for Annual Dam Safety Inspection
5/22/1996	FERC	GPC	Follow-up Action Items Resulting from Annual Dam Safety Inspection of Project
5/15/1997	FERC	GPC	Project Compliance Summary from the Hydropower License Compliance Tracking System
5/30/1997	FERC	GPC	Schedule Annual Operation Inspection
6/19/1998	FERC	GPC	Schedule Annual Operation Inspection
5/21/1999	FERC	GPC	Telephone conservation with M Phillips regarding an environmental & public use inspection
6/25/1999	FERC	GPC	Environmental and Public Use Inspection Follow up Action Items
7/22/1999	GPC	FERC	Response to Environmental and Public Use Inspection Follow up Action Items
9/15/1999	FERC	GPC	Letter order accepting Georgia Power's 7/22 Response to Environmental Inspection
9/20/1999	FERC	GPC	Environmental and Public Use Inspection Report
10/20/2000	SCG	FERC	Annual Operation Inspection Follow Up Action Item Piezometer Plots
10/27/2000	FERC	SCG	Annual Operation Inspection Follow UP

Document Date	From	То	Article 4 Subject
1/31/2001	FERC	GPC	Operation Report for Period 4/27/1996 to 6/12/2000
7/3/2001	FERC	GPC	Operation Inspection Follow Up Letter
8/17/2001	FERC	GPC	Operation Report for Period 6/12/2000 to 6/14/2001
8/6/2002	FERC	GPC	Schedule to Conduct Annual Dam Safety Inspection
9/20/2002	SCG	FERC	Annual Operation Inspection Follow up Letter and Action Items
9/24/2002	FERC	SCG	Operation Report for period 6/15/2001 to 9/5/2002
10/8/2002	SCG	FERC	Response to Annual Operation Inspection Follow up Letter and Action Items
6/19/2003	FERC	GPC	Annual Operation Inspection Report
6/24/2003	FERC	GPC	Request to Complete Physical Data Sheets
6/26/2003	FERC	GPC	Operation Report for Period 9/6/2002 to 6/10/2003
8/11/2003	SCG	FERC	Completed Physical Data Sheets
9/30/2003	FERC	GPC	Environmental Inspection Report
10/10/2003	FERC	SCG	Follow up Action Items to Environmental Inspection
11/17/2003	GPC	FERC	Response to Follow up Action Items to Environmental Inspection
6/9/2004	FERC	SCG	Operation Inspection Follow Up Letter
6/16/2004	FERC	FERC	Operation Inspection Report
4/25/2005	FERC	SCG	Operation Inspection Follow Up Letter
5/5/2005	SCG	FERC	Response to Operation Inspection Follow Up Letter
6/15/2005	FERC	GPC	Operations Report for Period 4/2004 to 4/13/05
10/27/2005	SCG	FERC	Response to Annual Operation Inspection Follow up Letter and Action Items
1/12/2006	SCG	FERC	Completion of Actions Required by Operation Inspection
5/11/2006	FERC	SCG	Operation Inspection Follow Up Letter
4/4/2007	FERC	FERC	Operation Inspection Report
4/12/2007	FERC	SCG	Annual Operation Inspection Follow up Letter and Action Items
8/7/2008	FERC	SCG	Operational Inspection Follow up Comment Letter
12/9/2008	SCG	FERC	Report of Completion of Follow up Action Items from Operational Inspection

Document Date	From	То	Article 4 Subject
2/19/2009	FERC	GPC	Schedule for the Annual Dam Safety Inspection
3/13/2009	FERC	SCG	Operational Inspection Follow up Comment Letter
4/29/2010	FERC	SCG	Annual Operation Inspection Follow-up Comment Letter
6/3/2010	SCG	FERC	Plan and Schedule to Address Follow-up Comment Letter
6/10/2010	FERC	SCG	Acceptance of Plan and Schedule to Address Follow-up Comment
9/10/2010	SCG	FERC	Update on Measures to Address Follow-up Comment Letter
10/25/2010	SCG	FERC	Acceptance of Plan and Schedule to Address Follow-up Comment
5/19/2011	FERC	SCG	Follow-up Comments on the Annual Operations Inspection
6/16/2011	SCG	FERC	Plan and Schedule to Address Follow-up Action Items Resulting from Annual Operational Inspection
6/27/2011	SCG	FERC	Confirmation of Completion of Annual Operation Inspection Recommendations
7/14/2011	FERC	SCG	FERC accepts GPC's reported Completion of Annual Operation Inspections Recommendations
7/17/2012	FERC	SCG	No Follow-up Action Items Resulting from Annual Dam Safety Inspection
3/28/2013	FERC	SCG	Schedule for the Annual Dam Safety Inspection
4/30/2013	SFERC	SCG	Annual Dam Safety Inspection Follow-up - No Action Items
4/1/2014	FERC	GPC	Annual Dam Safety Inspection Follow-up - No Action Items
9/3/2015	FERC	SCG	Follow-up Action Items Resulting from the Annual Dam Safety Inspection
10/26/2015	SCG	FERC	Completion of Actions Required by Operation Inspection
12/17/2015	FERC	SCG	FERC Accepts Completion Report of Annual Dam Safety Inspection Action Items
10/13/2016	FERC	SCG	Annual Dam Safety Inspection Follow-up Letter
10/25/2016	SCG	FERC	Response to Annual Operation Inspection Follow up Letter and Action Items
11/28/2016	FERC	SCG	Acceptance of Plan and Schedule to Address Follow-up Comment
1/31/2017	SCG	FERC	Annual Operation Inspection Action Item Completion
2/22/2017	FERC	SCG	Acceptance of 1/31/2017 Report of Completion of Annual Operations Inspection Action Items

Document Date	From	То	Article 4 Subject
8/11/2017	FERC	SCG	No Follow-up Action Items Resulting from Annual Dam Safety Inspection
6/12/2018	FERC	SCG	Annual Security Inspection Follow up
6/18/2018	FERC	SCG	Annual Dam Safety Inspection Follow up
11/19/2018	SCG	FERC	Supplemental Information for Drawdown Extension
11/27/2018	FERC	SCG	Annual Dam Safety Inspection Follow up
3/26/2019	FERC	SCG	FERC Request for Information Following a Complaint
4/24/2019	SCG	FERC	Response to Request for Information Re Complaint
5/1/2019	FERC	SCG	Flood Ops In Compliance with License Re Complaint
9/18/2020	SCG	FERC	Owners Inspection Form

Table H24 Article 5 Acquisition of Lands and Rights of Use

Document Date	From	То	Article 5 Subject
4/8/2003	GPC	FERC	Revised Exhibit G Pursuant to July 23, 2003, Order Approving Conveyance of Project Lands
12/18/2006	SCG	FERC	Status Update Re. Land Acquisition for Saddle Dikes
2/9/2007	SCG	FERC	Status Update Re. Land Acquisition and Construction Schedule for Saddle Dikes
5/20/1994	GPC	FERC	Request for Approval to Convey Land
8/30/1994	GPC	FERC	Georgia Power Proposes to Convey Project Land
9/19/1994	SHPO	FERC	Comments on Proposal to Convey Project Lands
6/8/2007	GPC	Mr. Meadows	Assurance to maintain or replace 30-foot access easement on Key Bridges Property
2/5/2014	GPC	FERC	Proposal to Convey Project Lands to GDOT for an Expansion of SR36 Bridge over Lake Jackson
3/10/2014	FERC	GPC	FERC acknowledges GPC's NOI to Convey Project Lands to GDOT

Table H25 Article 8 USGS Gages and Plant Electrical Gages

Document Date	From	То	Article 8 Subject
10/29/1993	GPC	FERC	Annual KWHr Generation Report
10/26/1994	GPC	FERC	Annual KWHr Generation Report
10/17/1995	GPC	FERC	Annual KWHr Generation Report
10/30/1997	GPC	FERC	Annual KWHr Generation Report
9/21/1998	GPC	USGS	Annual Stream Gage Payment
12/23/1998	GPC	FERC	Annual KWHr Generation Report
10/11/1999	GPC	FERC	Annual KWHr Generation Report
10/19/2000	GPC	FERC	Annual KWHr Generation Report
10/30/2000	SCG	USGS	Annual Stream Gage Payment
2/9/2001	USGS	GPC	USGS Gaging Station Upgrades
3/30/2001	USGS	GPC	Surface Water Resources Data-Georgia, 1999 Water Year
8/14/2001	GPC	USGS	Annual Stream Gage Payment
12/21/2001	GPC	FERC	Annual KWHr Generation Report
9/5/2002	SCG	USGS	Annual Stream Gage Payment
12/20/2002	GPC	FERC	Annual KWHr Generation Report
12/12/2003	SCG	USGS	Annual Stream Gage Payment
3/5/2004	SCG	FERC	Annual KWHr Generation Report
7/2/2004	SCG	USGS	Annual Stream Gage Payment
10/28/2004	SCG	FERC	Annual KWHr Generation Report
7/7/2005	USGS	SCG	Annual Stream Gage Payment
10/31/2005	SCG	FERC	Annual KWHr Generation Report
6/7/2006	SCG	USGS	Annual Stream Gage Payment
10/30/2006	SCG	FERC	Annual KWHr Generation Report
6/24/2007	GPC	USGS	Annual Stream Gage Payment
10/15/2007	SCG	FERC	Annual KWHr Generation Report

7/10/2008	SCG	USGS	Annual Stream Gage Payment
Document Date	From	То	Article 8 Subject
10/26/2008	SCG	FERC	Annual KWHr Generation Report
6/10/2009	SCG	FERC	Annual Stream Gage Payment
10/13/2009	SCG	FERC	Annual KWHr Generation Report
8/16/2010	SCG	USGS	Annual Stream Gage Payment
10/12/2010	SCG	FERC	Annual KWHr Generation Report
6/6/2011	SCG	USGS	Annual Stream Gage Payment
10/20/2011	SCG	FERC	Annual KWHr Generation Report
6/29/2012	SCG	USGS	Annual Stream Gage Payment
10/10/2012	SCG	FERC	Annual KWHr Generation Report
6/10/2013	SCG	USGS	Annual Stream Gage Payment
11/8/2013	SCG	FERC	Annual KWHr Generation Report
5/19/2014	SCG	USGS	Annual Stream Gage Payment
10/22/2014	SCG	FERC	Annual KWHr Generation Report
6/4/2015	SCG	USGS	Annual Stream Gage Payment
10/20/2015	SCG	FERC	Annual KWHr Generation Report
9/20/2016	GPC	FERC	Annual Stream Gage Payment
10/28/2016	SCG	FERC	Annual KWHr Generation Report
10/18/2017	SCG	FERC	Annual KWHr Generation Report
5/1/2018	SCG	USGS	Annual Stream Gage Payment
5/3/2019	SCG	USGS	Annual Stream Gage Payment
10/22/2019	SCG	FERC	Annual KWHr Generation Report
6/10/2020	SCG	USGS	Annual Stream Gage Payment
10/28/2020	SCG	FERC	Annual KWHr Generation Report

Table H26 Article 12 Prescription of Rule for Protection of Life, Health, and Property

Document Date	From	То	Article 12 Subject
2/26/1997	GPC	FERC	Letter Requesting EOT to Complete Data Sheets (National Inventory of Dams)
3/3/1997	FERC	GPC	Letter Order Granting EOT to Complete Data Sheets (National Inventory of Dams)
3/31/1997	GPC	FERC	National Inventory of Dams
6/27/2005	FERC	Licensees	Severe Storm Events and Project Operations
9/5/2006	FERC	Licensees	Severe Storm Events and Project Operations
6/16/2008	FERC	SCG	Communication and Correspondence During Severe Storm Events and Project Operations
7/22/2009	FERC	Licensees	Reporting Procedures Prior to, During and After Severe Storm Events
5/4/2012	FERC	SCG	Planning and Reporting Requirements for the ODSP
6/1/2012	SCG	FERC	Plan and Schedule Owner Safety Dam Program
7/9/2012	FERC	SCG	Acceptance of Plan and Schedule to Submit ODSP
3/8/2013	FERC	Record	Memo RE Review of the ODSP
8/29/2013	SCG	FERC	Revised ODSP
12/6/2013	FERC	SCG	Letter Accepting ODSP
8/4/2016	SCG	FERC	Resume of Proposed Auditor for the ODSP
8/23/2016	FERC	SCG	Acceptance of Auditor to the ODSP
2/22/2017	SCG	FERC	Final ODSP Audit Report
5/11/2017	FERC	SCG	Acceptance of Plan and Schedule to Address Auditor Comments on the ODSP
5/29/2019	FERC	SCG	Comments on Revision 2 of the ODSP
9/10/2019	SCG	FERC	Response to Comments on Revision 2 of the ODSP
10/21/2019	FERC	SCG	Acceptance of Revision 2 ODSP

 Table H27 Article 13 Comprehensive Development of Waterway

Document			
Date	From	То	Article 13 Subject
2/21/2000	GPC	USCOE	Comments RE Application for Tussahaw Reservoir and Dam
2/5/2001	GPC	FERC	Georgia Power Comments on USCOE APPLICATION # 200012080, TUSSAHAW RESERVOIR
2/21/2001	GPC	FERC	Georgia Power Comments on USCOE APPLICATION # 200012080, TUSSAHAW RESERVOIR
1/14/2002	GPC	Butts County Water and Sewer	Impediments to Use Of Jackson Lake as a Viable Water Supply Source
2/14/2002	GPC	Butts County Water and Sewer	Jackson Lake Water Withdrawal
3/19/2004	GPC	Mr. Platt	Request for Lake Jackson Storage to support Newton and Jasper County municipal purposes.
2/21/2004	CDC	Jasper County Board of	Current and Future Jacpar County water people
3/31/2004	GPC	Commissioners	Current and Future Jasper County water needs

Table H28 Article 14 Power and Communication Lines

Document Date	From	То	Article 14 Subject
10/10/2003	FERC	SCG	Follow up Action Items to Environmental Inspection
11/17/2003	GPC	FERC	Response to Follow up Action Items to Environmental Inspection
3/2/1994	FERC	GPC	Communication Lines Assessment
9/15/1994	GPC	FERC	Time Extension Request for Power and Communication Lines Survey
9/28/1995	GPC	FERC	Power and Communication Lines Assessment
4/27/2006	FERC	Licensees	Prepare to Discuss Transmission Line in the next Operation Inspection

Table H29 Article 15 Commission Ordered Enhancements to Fish and Wildlife Resources

Document Date	From	То	Article 15 Subject
			EXECUTIVE ORDER 12962/Recreational Fishery Resources Conservation Plan/Nation-wide
7/20/1998	FERC	GPC	Goals
			FERC Initiates Study to Evaluate the Effectiveness of License Articles Related to Environmental
3/12/2002	FERC	Licensees	Mitigation
			EVALUATION OF MITIGATION EFFECTIVENESS AT HYDROPOWER PROJECTS: DRAFT WATER
10/8/2002	GPC	FERC	OUALITY REPORT
5/5/2003	FERC	Licensees	Mitigative Effectiveness Studies at the FERC: Water Quality
9/30/2003	FERC	Licensees	Evaluation of Mitigation Effectiveness at Hydropower Projects: Fish Passage
7/16/2012	SCG	FERC	Fish Kill Due to High Ambient Temperatures and Drought Conditions
8/7/2012	FERC	SCG	Fish Kill Beyond Control of Licensee - No Action Required

Table H30 Article 18 Public Access and Recreation

Document Date	From	То	Article 18 Subject
6/25/1999	FERC	GPC	Environmental and Public Use Inspection Follow up Action Items
7/22/1999	GPC	FERC	Response to Environmental and Public Use Inspection Follow up Action Items
9/15/1999	FERC	GPC	Letter order accepting Georgia Power's 7/22 Response to Environmental Inspection
3/22/1999	FERC	Licensees	summary of some of the requirements of Parts 8 & 12 of FERC's 18 Code of Federal Regulations
2/22/2000	FERC	Licensees	summary of the requirements of Parts 8 and 12 to assist City of Abbeville, SC et al in keeping compliance with requirements
1/9/2012	FERC	Licensees	Recreation Guidance's Re. Relicensing

Table H31 Article 19 Pollution Prevention

Document Date	From	То	Article 19 Subject	
10/10/2003	FERC	SCG	Follow up Action Items to Environmental Inspection	
11/17/2003	GPC	FERC	Response to Follow up Action Items to Environmental Inspection	
10/31/1994	GPC	FERC	Request to Enter Programmatic Agreement for Shoreline Management	
6/7/1995	GPC	FERC	Withdrawal of 10/31/1994 Request for PA for Shoreline Mgmt. Program	
7/25/1995	FERC	GPC	Approval of Withdrawal of Shoreline Management Programmatic Agreement	
11/1/1999	USFWS	FERC	Proposed Conditions of Permit Approving Proposal to Dredge South River	
11/2/1999	GPC	FERC	Additional Information Pursuant to September 19, 1999, AIR	
11/17/1999	FERC	GPC	Request for Additional Information for an Environmental Assessment RE. Dredging Prop No	
11/22/1999	FERC	GPC	Documents Discussion of USFWS Comments on Application for Appl of Non-Project Use of Project Lands	
2/15/2000	FERC	GPC	Order approving Georgia Power Co's request for authorization to permit Lambert Sand & Gravel Co to remove sediments by mechanical dredging from Yellow River & South River sections of project reservoir	
3/2/2000	FERC	Public	Notice of Availability of Final Environmental Assessment	
3/23/2000	FERC	GPC	Letter to GPC Answering Shoreline Management Questions	
8/27/2001	GPC	FERC	Application for Amendment of License to Adopt PA Related to Shoreline Management	
1/7/2002	FERC	GPC	Order Approving Shoreline Management PA	

Table H32 Article 201 Annual Administrative Charges

Document Date	From	То	Article 201 Subject
3/29/1993	FERC	GPC	Statement of Annual Charges
9/24/1993	FERC	GPC	Order on Rehearing Regarding Annual Charges
12/28/1993	GPC	FERC	Annual Charges Payments Billing Error
3/20/1995	FERC	GPC	Revised Date for Issuing Annual Charges Bills
2/6/1996	FERC	GPC	Delayed Issuance of FY1996 Hydropower Statements of Annual Charges
2/11/1998	FERC	GPC	Statement of Annual Charges Forthcoming in June
8/22/2000	GPC	FERC	Georgia Power Co's appeal to the Chief Financial Officer of Annual Charges Assessment
10/19/2000	SCG	FERC	Annual Statement of Generation
7/16/2001	FERC	GPC	Annual Administrative Charges
7/25/2001	FERC	GPC	Revised Annual Administrative Charges
8/24/2001	GPC	FERC	Annual Administrative Payment and Appeal
12/21/2001	GPC	FERC	Annual Statement of Generation
8/9/2002	Troutman Sanders	FERC	Appeal to the Chief Financial Officer of Annual Charges
8/9/2002	GPC	FERC	Annual Administrative Payment
7/23/2003	FERC	GPC	Administrative Charges Assessment Does Not Constitute Payment Obligation
8/21/2003	FERC	SCG	Annual Administrative Charges
8/22/2003	SCG	FERC	Annual Administrative Payment
9/8/2004	SCG	FERC	Annual Administration Payment
5/10/2005	SCG	FERC	Comments Following Technical Conference on Annual Administrative Charges
9/15/2005	SCG	FERC	Annual Administrative Payment
8/4/2006	FERC	SCG	Annual Administrative Charges
	Troutman		
9/8/2006	Sanders	FERC	Appeal to the Chief Financial Officer of Annual Charges
9/9/2006	SCG	FERC	Annual Administrative Payment

Document Date	From	То	Article 201 Subject
9/28/2006	FERC	SCG	Carry Forward Other Federal Agencies Charge Balance
11/9/2006	SCG	FERC	Payment of Balance of Administrative Charges Related to Other Federal Agencies
4/9/2007	FERC	Troutman Sanders	Solicitation for Specific Issues Re. Notice Reporting costs for Other Federal Agencies' Administrative Annual Charges for Fiscal Year 2005
5/8/2007	Troutman Sanders	FERC	Withdrawal of 9/8/2006 Appeal to the Chief Financial Officer of Annual Charges
5/25/2007	FERC	GPC	Withdrawal of 9/8/2006 Appeal of Annual Charges Is Effective as Of 5/23/2007
9/14/2007	FERC	SCG	Annual Administration Charges
7/14/2008	SCG	FERC	Annual Administration Payment
10/17/2008	FERC	SCG	Annual Charges Statements Moving to Paperless System
8/6/2009	SCG	FERC	Annual Administrative Charges
8/4/2010	SCG	FERC	Annual Administrative Charges
4/10/2018	FERC	SCG	Annual Charges Assessment

Table H33 Article 203 Standard Land Use Article

Document Date	From	То	Article 203 Subject	
10/31/1994	GPC	FERC	Request to Enter Programmatic Agreement for Shoreline Management	
6/7/1995	GPC	FERC	Withdrawal of 10/31/1994 Request for PA for Shoreline Mgmt. Program	
7/25/1995	FERC	GPC	Approval of Withdrawal of Shoreline Management Programmatic Agreement	
11/1/1999	USFWS	FERC	Proposed Conditions of Permit Approving Proposal to Dredge South River	
11/2/1999	GPC	FERC	Additional Information Pursuant to September 19, 1999, AIR	
11/17/1999	FERC	GPC	Request for Additional Information for an Environmental Assessment RE. Dredging Proposal No	
11/22/1999	FERC	GPC	Documents Discussion of USFWS Comments on Application for Appl of Non-Project Use of Project Lands	
2/15/2000	FERC	GPC	Order approving Georgia Power Co's request for authorization to permit Lambert Sand & Gravel Co to remove sediments by mechanical dredging from Yellow River & South River sections of project reservoir	
3/2/2000	FERC	Public	Notice of Availability of Final Environmental Assessment	
3/23/2000	FERC	GPC	Letter to GPC Answering Shoreline Management Questions	
8/27/2001	GPC	FERC	Application for Amendment of License to Adopt PA Related to Shoreline Management	
1/7/2002	FERC	GPC	Order Approving Shoreline Management PA	
7/22/1999	GPC	FERC	Response to Environmental and Public Use Inspection Follow up Action Items	
9/15/1999	FERC	GPC	Letter order accepting Georgia Power's 7/22 Response to Environmental Inspection	
4/8/2003	GPC	FERC	Revised Exhibit G Pursuant to July 23, 2003, Order Approving Conveyance of Project Lands	
8/30/1994	GPC	FERC	Georgia Power Proposes to Convey Project Land	
9/19/1994	SHPO	FERC	Comments on Proposal to Convey Project Lands	
6/28/1993	FERC	GPC	Order Approving and Modifying Small Dredging Permit Program	
11/5/1993	FERC	Advisory Council	Request for Comments on Programmatic Agreement for the Management of Historic Properties	
1/12/1994	GPC	FERC	Annual Dredging Reports	
1/18/1994	GPC	FERC	Annual Land Conveyance Report	

Document Date	From	То	Article 203 Subject
2/24/1994	FERC	GPC	Acceptance of Dredging Reports
1/26/1995	GPC	FERC	Annual Land Conveyance Report
12/14/1995	GPC	FERC	Request for Approval to Dredge Tussahaw Creek Arm of Lake Jackson
12/27/1995	FERC	GPC	Approval of Dredging Activity
1/24/1996	GPC	FERC	Annual Conveyance Report
2/22/1996	FERC	GPC	Letter Order Accepting Annual Conveyance Report
2/23/1996	GPC	FERC	Dredging Completion Report
10/16/1996	GPC	FERC	Request for Approval of Non-Project Use of Project Lands and Waters
6/26/1997	FERC	Public	Notice of Application to Permit Non-Project Use of Project Lands
8/29/1997	GPC	FERC	Withdrawal of Non-Project Use of Project Lands and Waters Application Filed 10/16/1996
1/23/1998	GPC	FERC	Annual Dredging Report
3/17/1998	FERC	GPC	Acceptance of Annual Dredging Report
12/28/1998	GPC	FERC	Quarterly Hydro Surveillance Report
1/26/1999	GPC	FERC	Annual Conveyance Report
2/5/1999	FERC	GPC	Letter accepting Georgia Power Co's Annual Conveyance Report
2/7/1999	GPC	FERC	Request for Approval of Non-Project Use of Project Lands and Waters
7/12/1999	FERC	Public	Notice of Amendment of License and Soliciting Comments, Motions to Intervene, and Protests
7/15/1999	USFWS	FERC	Request for EOT to Comment on Non-Project Use of Project Lands
8/24/1999	USFWS	FERC	No Comments on Notice of Amendment of License
9/17/1999	FERC	GPC	Request for Additional Information RE. Dredging, Proposal for an Environmental Assessment
9/27/1999	FERC	USFWS	Request for Review of Dredging Proposal
1/24/2000	GPC	FERC	Annual Dredging Report
2/10/2000	GPC	FERC	Amend Licenses to Incorporate Order Modifying and Approving Dredging Permit Program
5/11/2000	FERC	GPC	Order Amending Licenses (Small Dredging Permit Program)
5/24/2000	GPC	HPD	Request for Review of Proposal to Direct Bore Fiber Optic Under Lake Jackson
6/14/2000	HPD	GPC	Determine Proposal Will Not Affect Any Historic Properties

Document Date	From	То	Article 203 Subject
6/19/2000	GPC	FERC	Application to Permit Non-Project Use of Project Lands
8/11/2000	GPC	FERC	Determination of Authority to Deny Non-Project Use of Project Lands and Waters Inconsistent with Project Purposes
11/3/2000	GPC	FERC	Application for Amendment of License to Permit Non-Project Use of Project Lands and Waters
12/22/2000	FERC	GPC	Order Approving Non-Project Use of Project Lands and Waters
1/29/2001	GPC	FERC	Annual Dredging Report
4/26/2001	GPC	FERC	Application for Amendment of License to Permit Non-Project Use of Project Lands and Waters
5/25/2001	FERC	GPC	Order Approving Non-Project Use of Project Lands and Waters
6/8/2001	FERC	GPC	Acceptance of Annual Dredging Report
6/12/2001	FERC	GPC	Order Approving Non-Project Use of Project Lands and Waters
1/16/2002	GPC	FERC	Annual Dredging Report
2/4/2002	FERC	GPC	Acceptance of Annual Dredging Report
5/9/2002	FERC	GPC	Notice of Application for Amendment of License to Approve Non-Project Use of Project Lands
6/4/2002	USFWS	FERC	No Comments on Application to Amend License (ER 02/434)
7/23/2002	FERC	GPC	Order Approving Conveyance of Project Lands
1/3/2003	GPC	FERC	Annual Dredging Report
2/28/2003	FERC	GPC	Letter Order Accepting Annual Dredging Reports
9/2/2003	GPC	FERC	Request for Approval of Non-Project Use of Project Lands and Waters
12/11/2003	FERC	GPC	Order Approving Non-Project Use of Project Lands and Waters
1/26/2004	GPC	FERC	Annual Dredging Report
1/26/2005	GPC	FERC	Annual Conveyance Report
9/18/2005	GPC	FERC	Request for Approval of Non-Project Use of Project Lands and Waters
1/31/2006	GPC	FERC	Annual Dredging Report
4/3/2006	FERC	GPC	Letter Order Accepting Dredging Report
1/23/2007	GPC	FERC	Annual Dredging Report
1/31/2007	GPC	FERC	Annual Conveyance Report

Document Date	From	То	Article 203 Subject
1/29/2008	GPC	FERC	Annual Dredging Report
1/31/2008	GPC	FERC	Annual Conveyance Report
5/20/2008	FERC	GPC	Letter Order Accepting Annual Dredging Reports
1/23/2009	GPC	FERC	Annual Dredging Report
1/27/2010	GPC	FERC	Annual Dredging Report
8/2/2010	FERC	SCG	Letter Order Accepting Annual Dredging Reports
1/31/2011	GPC	FERC	Annual Dredging Report
2/17/2011	FERC	SCG	Letter Order Accepting Annual Dredging Reports
1/8/2013	GPC	FERC	Request to Permit Non-Project Use of Project Lands
1/31/2013	GPC	FERC	Annual Dredging Report
			FERC States Permit Residential Addition on Project Lands Can Be Done Without Prior
2/14/2013	FERC	GPC	Commission Approval
1/31/2014	GPC	FERC	Annual Dredging Report
5/27/2014	GPC	FERC	Notice of Intent to Convey Construction Easement
9/9/2014	GPC	FERC	Notice of Intent to Convey Construction Easement
10/1/2014	FERC	GPC	FERC acknowledges GPC's NOI to Permit Construction of a Residential Addition
6/17/2015	FERC	GPC	FERC acknowledges GPC's NOI to Permit Construction of a Residential Addition
9/8/2016	GPC	FERC	NOI to Convey Construction Easement
9/21/2016	FERC	SCG	Acknowledgement of 9/8/2016 NOI to Convey Land
1/30/2017	GPC	FERC	Annual Conveyance Report
1/30/2017	GPC	FERC	Annual Dredging Report
4/24/2017	FERC	SCG	Letter Order Accepting Annual Dredging Reports
1/10/2019	GPC	FERC	Annual Dredging Report

Table H34 Article 401 Dissolved Oxygen Enhancement

Document Date	From	То	Article 401 Subject	
7/22/1999	GPC	FERC	Response to Environmental and Public Use Inspection Follow up Action Items	
9/15/1999	FERC	GPC	Letter order accepting Georgia Power's 7/22 Response to Environmental Inspection	
6/25/1999	FERC	GPC	Environmental and Public Use Inspection Follow up Action Items	
10/27/2005	SCG	FERC	Response to Annual Operation Inspection Follow up Letter and Action Items	
7/3/2008	SCG	FERC	Notification of Oxygenation Weir Removal	
8/15/1991	EPD	GPC	1991 08 15 CG91908 EPD to GPC 401 Water Quality Certification	
2/11/1994	EPD	GPC	Comments on Dissolved Oxygen Monitoring Plan	
3/22/1994	GPC	FERC	Filing Dissolved Oxygen Monitoring Plan	
6/30/1994	FERC	GPC	Order Approving Dissolved Oxygen Monitoring Plan	
10/12/1994	DNR	FERC	Postpone Evaluation of Oxygenation Weir Performance	
11/7/1994	GPC	FERC	Request for Extension of Time to Complete DO Study Due to Flood	
12/15/1994	FERC	SCG	Order Amending Dissolved Oxygen Plan	
3/21/1995	GPC	FERC	Proposed Modifications to Oxygenation Weir DO Monitoring Plan	
2/14/1996	GPC	FERC	Effectiveness of an Oxygenating Weir Below Lloyd Shoals	
5/28/1996	FERC	GPC	Order Modifying and Approving DO Monitoring Study Results and Recommendations	
			Order Granting Extension of Time to Comply with Order Modifying and Approving Dissolved	
1/13/1997	FERC	GPC	Oxygen Monitoring Study Results and Recommendations	
1/20/1997	GPC	DNR	Continued Evaluation of an Oxygenating Weir Below the Lloyd Shoals Project, 1995-1996	
2/24/1997	DNR	GPC	Continued Evaluation of an Oxygenating Weir Below the Lloyd Shoals Project, 1995-1996	
2/25/1997	DNR	GPC	Continued Evaluation of an Oxygenating Weir Below the Lloyd Shoals Project, 1995-1996	
2/26/1997	GPC	FERC	Continued Evaluation of an Oxygenating Weir Below the Lloyd Shoals Project, 1995-1996	
4/7/1997	GPC	DNR	Continued Evaluation of an Oxygenating Weir Below the Lloyd Shoals Project, 1995-1996	
4/15/1997	GPC	FERC	Agency Correspondence Re. Continued Evaluation of an Oxygenating Weir	
7/3/1997	FERC	GPC	ORDER APPROVING DISSOLVED OXYGEN MONITORING STUDY RECOMMENDATIONS	
12/3/1997	GPC	FERC	DO Monitoring Results and Proposal to Study Alternative DO Enhancement Methods in 1998	

Document Date	From	То	Article 401 Subject
8/11/1999	GPC	GPC	**Oxygenation Weir Repairs
12/13/2006	GPC	GDNR	Summary Results of 2006 Powerhouse Tailrace Aeration Monitoring
11/19/2007	SCG	DNR	Dissolved Oxygen Enhancement Results of Aeration System and Weir Removal
12/26/2007	GDNR	SCG	Concurrence with Weir Removal and Effectiveness of Aeration System Results
9/8/2008	FERC	SCG	Acceptance of Weir Removal Notification

Table H35 Article 402 Minimum Flows

Document Date	From	То	Article 402 Subject
7/28/1993	FERC	GPC	Request for Flow Data from USGS Ocmulgee River at Jackson, GA gage
11/9/1993	GPC	FERC	Georgia Power Submits Information RE Lloyd Shoals Project
6/23/1994	GPC	FERC	Request for Approval to Use Jackson Gage for Minimum Flows
1/6/1996	GPC	FERC	Minimum Flow Deviation
2/8/1996	FERC	GPC	Minimum Flow Deviation Not a Violation
1/13/1997	GPC	FERC	Deviation of Minimum Flow and Notice of Upcoming Study to Define Relationship B/W the USGS gage and Staff gage.
1/13/1997	GPC	DNR	Minimum Flow Study
6/13/1997	FERC	GPC	January 13, 1997, Reported Minimum Flow Deviation Not a Violation
2/22/1999	SCG	EPD	Transmittal of License Order and Minimum Flow Requirement
3/26/2002	GPC	FERC	Minimum Flow Deviation Report
5/21/2002	FERC	GPC	Violation of Article 402 Minimum Flow Requirement
9/19/2003	SCG	FERC	Minimum Flow Deviation
7/5/2005	SCG	<u>FERC</u>	Deviation of Minimum Flow
12/15/2005	FERC	SCG	Minimum Flow Deviation Not a Violation
9/6/2007	FERC	SCG	Invitation to Discuss Flow-Related or Water Level License Requirement Due to Drought
12/27/2007	SCG	FERC	Minimum Flow Deviation Report
6/26/2008	FERC	SCG	Minimum Flow Deviation Not a Violation
8/15/2012	SCG	FERC	Interruption in Minimum Flow Due to Unit Trip
9/20/2012	FERC	SCG	Deviation of Minimum Flow Not a Violation of License
1/7/2013	SCG	FERC	Minimum Flow Deviation Due to Plant Trip
3/8/2013	FERC	SCG	FERC Finds Deviation of Minimum Flow Reported on 1/7/2013 Is Not A Violation of the License
8/14/2017	SCG	FERC	Report of Deviation of Minimum Flow
11/15/2017	FERC	SCG	Letter Notice that Minimum Flow Deviation Reported 8/14/2017 Is A Violation of License
5/10/2018	SCG	FERC	Minimum Flow Deviation

Document Date	From	То	Article 402 Subject
5/25/2018	SCG	FERC	Minimum Flow Deviation
11/6/2018	FERC	SCG	Minimum Flow Deviations Not a Violation of License

Table H36 Article 403 Cultural Resources Management Plan

Document Date	From	То	Article 403 Subject
5/24/2000	GPC	HPD	Request for Review of Proposal to Direct Bore Fiber Optic Under Lake Jackson
6/14/2000	HPD	GPC	Determine Proposal Will Not Affect Any Historic Properties
2/14/2013	FERC	GPC	FERC States Permit Residential Addition on Project Lands Can Be Done Without Prior Commission Approval
6/10/1993	SHPO	FERC	Adverse Effect Proposed Alterations of the Handicap Access Ramp
4/8/1994	FERC	Advisory Council	Request for Comments on Draft Programmatic Agreement for the Management of Historic Properties
4/8/1994	FERC	SHPO and ACHP	Request for Comments on Draft Programmatic Agreement for the Management of Historic Properties
4/8/1994	FERC	GPC	Request for Comments on Draft Programmatic Agreement for the Management of Historic Properties
4/20/1994	GPC	FERC	Georgia Power Seeks to Add Executed PA for the Management of Historic Properties to License
6/7/1994	GPC	FERC	Transmittal of Historic Structures Maintenance Guidelines
6/7/1994	GPC	SHPO	Transmittal of Historic Structures Maintenance Guidelines
7/28/1994	GPC	FERC	Proof of Documents Transmitted to SHPO
8/29/1994	FERC	Advisory Council	Request for Comments on Cultural Resources Management Plan
4/14/1995	FERC	<u>GPC</u>	Selected Historical Inspection Reports
5/1/1995	FERC	GPC	Transmission of Selected Historical Inspection Reports
9/8/1995	FERC	GPC	Restricted Service List for Programmatic Agreement for Managing Properties Included in or Eligible for to be Included in the National Register of Historic Places
10/18/1995	Advisory Council	GPC	Comments of Advisory Council on Historic Preservation RE Programmatic Agreement
10/31/1995	FERC	Advisory Council	Submits Historic Preservation Revised Programmatic Agreement

Document Date	From	То	Article 403 Subject
		Advisory	
12/14/1995	FERC	Council	Request for Approval of Programmatic Agreement
1/18/1996	GPC	FERC	Transmittal of Executed Programmatic Agreement
2/14/1996	FERC	GPC	Order Amending Article 403
		SHPO and	
2/22/1996	FERC	ACHP	Distribution of Executed PA and Order Amending Article 403
3/31/1997	GPC	FERC	Annual Cultural Resources Management Report
4/29/1997	FERC	GPC	Acceptance of Annual Cultural Resources Management Plan
3/1/2003	GPC	FERC	Annual Cultural Resources Monitoring Report
1/13/2004	GPC	FERC	Annual Cultural Resource Management Report
3/5/2004	FERC	GPC	Acceptance of Annual Cultural Resource Management Report
4/19/2004	FERC	SCG	Annual Cultural Resources Management Report Acknowledgement
1/14/2005	SCG	FERC	Annual Cultural Resources Monitoring Report
4/19/2005	FERC	GPC	Letter Order Accepting CRMR
11/29/2005	GPC	FERC	Request for Extension of time to File Cultural Resources Monitoring Report
12/13/2005	FERC	GPC	Order granting Extension of Time to File Cultural Resources Monitoring Plan
4/4/2006	SCG	FERC	Annual Cultural Resources Monitoring Report
5/16/2006	FERC	SCG	Acceptance of Annual Cultural Resources Monitoring
1/30/2007	GPC	FERC	Annual Report of Cultural Resource Monitoring
4/4/2007	FERC	SCG	Acceptance of Annual Report of Cultural Resource Monitoring
1/14/2008	GPC	FERC	Annual Cultural Resources Monitoring Report
3/14/2008	FERC	SCG	Acceptance of the Annual Cultural Resources Monitoring Report
1/15/2009	GPC	FERC	Annual Cultural Resources Monitoring Report
1/7/2010	GPC	FERC	Annual Cultural Resources Monitoring Report
1/19/2010	GPC	FERC	Annual Cultural Resources Monitoring Report
1/28/2010	FERC	SCG	Letter Order Accepting the CRMR

Document Date	From	То	Article 403 Subject
2/1/2010	FERC	SCG	Acceptance of Annual CRMR
2/4/2011	FERC	SCG	FERC Accepts GPC CRMR
1/31/2012	GPC	FERC	Annual Cultural Resources Monitoring Report
1/8/2013	GPC	FERC	Request to Permit Non-Project Use of Project Lands
1/31/2013	GPC	FERC	Annual Cultural Resources Monitoring Report
2/6/2013	GPC	FERC	Correction to Annual Cultural Resources Monitoring Report
12/27/2014	GPC	FERC	Annual Cultural Resources Monitoring Report
12/31/2014	GPC	FERC	Annual CRMR
12/23/2015	GPC	FERC	Annual CRMR
12/30/2016	GPC	FERC	Revised CRMR
10/26/2017	GPC	GPC	Documentation of Cultural Resources Training
12/19/2017	GPC	FERC	Annual Cultural Resources Monitoring Report
12/7/2018	GPC	SCG	CRMP Training
12/27/2018	GPC	FERC	Annual Cultural Resources Monitoring Reports
12/1/2019	GPC	FERC	Annual Cultural Resources Monitoring Report
12/31/2020	GPC	FERC	Annual Cultural Resources Monitoring Report

Table H37 Article 404 Recreation and Land Use Enhancement Measures

Document Date	From	То	Article 404 Subject
6/10/1993	SHPO	FERC	Adverse Effect Proposed Alterations of the Handicap Access Ramp
11/8/1993	GPC	FERC	Compliance with Article 404, Revised Exhibits A, E, F and G
3/1/1995	GPC	FERC	As Built and Exhibit G Drawings Pursuant to Article 404
4/17/1995	GPC	FERC	As built Drawings of the Recreation Facilities - Article 404
5/12/1995	FERC	GPC	Order Approving Revised License Exhibits A and F, Modifying and Approving Exhibits G and E as Recreation Exhibits
7/20/1995	GPC	FERC	Filing Exhibit F and R Aperture Cards
10/4/2016	GPC	GDNR WRD	Request for Consultation to Amend Recreation Plan
10/4/2016	GPC	USFS	Request for Consultation to Amend Recreation Plan
10/4/2016	GPC	USFWS	Request for Consultation to Amend Recreation Plan
10/14/2016	GPC	FERC	Application to Amend Recreation Plan
11/7/2016	GDNR	GPC	Concurrence RE Amendment to LS Recreation Plan
11/11/2016	GPC	FERC	Application to Amend License to Revise Recreation Plan
11/15/2016	FERC	SCG	Order Amending Recreation Plan
11/18/2016	FERC	SCG	Errata Notice to the 11/15/216 Order Amending Recreation Plan
12/12/2016	GPC	FERC	Completed Recreation Amenity Table
4/21/2017	GPC	FERC	Revised Recreation Amenities Table
6/22/2017	GPC	FERC	Request for Extension Of Time to File As built Drawings for Tailrace Fishing Pier
7/12/2017	FERC	SCG	Order Granting EOT to Complete Tailrace Fishing Pier As-built Plans
7/27/2017	SCG	FERC	As built Drawings of the Tailrace Fishing Pier
12/12/2017	FERC	SCG	Order Approving As-Built Site Plan Drawings Filed 7/27/2017

Table H38 Article 405 Recreation Use Monitoring

Document Date	From	То	Article 405 Subject
4/22/1993	FERC	GPC	Errata Notice for Order Issuing New License
1/30/1996	FERC	Licensees	New FERC Form-80 Form and Guidance
		GDNR	
2/7/1996	GPC	WRD	Recreation Use Monitoring Plan (Methodology and Frequency of Monitoring)
2/7/1996	GPC	NPS	Transmittal of a Copy of the Recreational Use Monitoring Plan
	GDNR		
2/20/1996	WRD	GPC	Comments on the Recreational Use Study Plan Proposal
3/31/1997	GPC	FERC	Request for Extension of Time to File FERC Form 80
4/23/1997	FERC	GPC	Grants Extension of Time to File FERC Form 80
5/2/1997	GPC	FERC	FERC Form 80 Reports
2/1/1998			**Lake Jackson Recreation Study
		GDNR	
2/23/1998	GPC	WRD	Request for Consultation RE. Recreation Study
3/25/1998	GDNR	GPC	Review of Lake Jackson Recreation Study
5/22/1998	GPC	GDNR	Response to GDNR's Lake Jackson Recreation Study Review Dated 3/25/1998
5/26/1998	GPC	FERC	Lake Jackson Recreation Study
7/2/1998	FERC	GPC	Acceptance of Lake Jackson Recreation Monitoring Report
7/22/1999	GPC	FERC	Response to Environmental and Public Use Inspection Follow up Action Items
9/15/1999	FERC	GPC	Letter order accepting Georgia Power's 7/22 Response to Environmental Inspection
1/17/2002	FERC	GPC	Instructions for Conducting FERC Form 80
2/24/2003	FERC	<u>GPC</u>	Soliciting Comments on the Pilot Program for Filing FERC Form 80 Electronically
3/31/2003	GPC	FERC	FERC Form 80
7/8/2003	GPC	NPS	Request for Consultation on the Recreation Use Study Report
		GDNR	
7/8/2003	GPC	WRD	Request for Consultation on the Recreation Use Study Report
8/15/2003	GDNR	GPC	Comments on the 2002-2003 Recreation Use Study Report

Document Date	From	То	Article 405 Subject
		GDNR	
8/22/2003	GPC	WRD	Proposal to Meet and Discuss comments on Recreation Use Study Report
8/25/2003	GPC	FERC	Transmittal Letter Re. 2002 Lake Jackson Recreation Use Study
			Acknowledgement of Schedule to Consult with GDNR RE. 2002-2003 Recreation Study Results
4/14/2004	FERC	SCG	No
5/12/2004	GPC	FERC	May 5, 2004, Article 405 Meeting Minutes
5/13/2004	GPC	FERC	2002-2003 Recreation Use Study Report
11/23/2004	FERC	SCG	Licensee Meeting with Georgia DNR
11/23/2004	FERC	GPC	Letter Order Accepting 2002-2003 Recreation Use Study Report
1/2/2008	FERC	Licensees	Instructions on the FERC Form 80 Process
4/7/2009	GPC	FERC	Form 80
1/9/2012	FERC	Licensees	Recreation Guidance's Re. Relicensing
		GDNR	Request for Concurrence To Amend LS License to Remove Requirement to Conduct
10/12/2012	GPC	WRD	Recreation Monitoring Studies
3/8/2013	GPC	FERC	Application to Amend License to Remove Article 405
5/17/2013	FERC	SCG	Order Modifying Article 405
1/16/2014	FERC	SCG	Reminder to Conduct Form 80 Surveys in 2014
3/3/2014	GDNR	GPC	Comments on the Recreational Use Survey Report
2/13/2015	GPC	FERC	Request for EOT to File the Recreation Monitoring Report
2/27/2015	FERC	SCG	order Granting Extension of Time to File Recreation Monitoring Report
3/30/2015	GPC	FERC	Request for an Additional EOT to File the Recreation Monitoring Report
3/31/2015	GPC	FERC	FERC Form 80
4/8/2015	FERC	GPC	order Granting Extension of Time to File Recreation Monitoring Report
6/1/2015	GPC	FERC	Recreation Monitoring Report
12/11/2019	SCG	FERC	Request for Modification of Article 405
2/19/2020	FERC	SCG	Order Amending Recreation Use Monitoring Provisions - Article 405
4/21/2020	GPC	FERC	Public Use of Recreation Sites During COVID-19

Table H39 Owners Dam Safety Program (ODSP) Submittals

Document Date	From	То	Owners Dam Safety Program Subject
5/4/2012	FERC	SCG	Letter to Southern Company providing an outline of the 2012 planning and reporting requirements for the Owners Dam Safety Program (ODSP), and requesting a plan and schedule within 30 days of this letter, under P-485 et al.
6/1/2012	SCG	FERC	Southern Company Generation submits the plan and schedule reference the Owner Safety Dam Program reference Bartlett's Ferry Hydro Project et al under P-485 et al.
7/9/2012	FERC	SCG	Letter order accepting Doug Jones' 6/1/12 letter with a plan and schedule to submit Southern Company's Owners Dam Safety Program for the Bartlett's Ferry Project et al under P-485 et al.
10/31/2012	SCG	FERC	Submission of ODSP Document
3/8/2013	FERC	SCG	Memo dated 3/8/13 reference the review of Owner's Dam Safety Program for FERC Project under P-82 et al.
8/29/2013	SCG	FERC	Southern Company Generation submits the revised Owner's Dam Safety Program for the Bartlett's Ferry Project under P-485 et al.
12/6/2013	FERC	SCG	Letter to Southern Company reference the Owner's Dam Safety Program for the Mitchell Project et al under P-82 et al.
12/11/2014	FERC	SCG	Annual Letter - Reminder of Responsibilities
12/17/2014	SCG	FERC	Acknowledgement of Annual Letter
8/4/2016	SCG	FERC	Southern Company Generation submits the resume of Mr. Edwin C. Luttrell, P.E. for approval as the proposed auditor for the Owners Dam Safety Program re the Bartlett's Ferry Hydro Project et al under P-485 et al.
8/11/2016	SCG	Other	OSDP (Owner's Dam Safety Plan) Audit
8/23/2016	FERC	SCG	Letter order accepting Alabama Power Company's 8/4/16 filing of a statement of qualifications for auditing the Southern Company's Owner's Dam Safety Program for the Bartlett's Ferry Project et al under P-485 et al.

Table H40 Reported Fatalities and Injuries of Project Users

Table 1140 Reported		1	•
Document Date	From	То	Reported Fatalities and Injuries of Project Users Subjects
4/17/1995	GPC	FERC	Accidental Death Report
8/8/1995	GPC	FERC	Report Summarizing Injury and Property Damage Report
8/15/1997	GPC	FERC	Non-Project Related Fatality (Drowning)
			Summary of some of the requirements of Parts 8 & 12 of FERC's 18 Code of Federal
3/22/1999	FERC	Licensees	Regulations
8/26/1999	GPC	FERC	Georgia Power Reports a Non-Project Related Injury
10/25/1999	GPC	FERC	Non-Project Related Fatality (Boating Accident)
			Summary of the requirements of Parts 8 and 12 to assist City of Abbeville, SC et al in keeping
2/22/2000	FERC	Licensees	compliance with requirements
6/12/2000	GPC	FERC	Non-Project Related Fatality
3/25/2003	GPC	FERC	Fatality Report
7/23/2003	GPC	FERC	Fatality Report (drowning)
7/27/2004	GPC	FERC	Fatality Report (drowning)
1/31/2005	GPC	FERC	Non- Project Related Injury and Fatality
1/31/2005	GPC	FERC	Fatality Report (drowning)
1/31/2005	GPC	FERC	Fatality Report (drowning)
6/20/2005	GPC	FERC	Fatality Report (drowning)
7/11/2005	GPC	FERC	Non-Project Related Injury
8/4/2005	GPC	FERC	Non-Project Related Injury
8/4/2005	GPC	FERC	Non-Project Related Injury
4/24/2006	GPC	FERC	Non-Project Related Injury and Fatality
4/24/2006	GPC	FERC	Non-Project Related Injury and Fatality
4/28/2006	GPC	FERC	Non-Project Related Injury
9/12/2007	GPC	FERC	Non-Project Related Fatality
7/10/2008	GPC	FERC	Non-Project Related Injury
7/10/2008	GPC	FERC	Non-Project Related Injury

Document Date	From	То	Reported Fatalities and Injuries of Project Users Subject
7/15/2008	GPC	FERC	Non-Project Related Injury
2/23/2010	GPC	FERC	Report of a Non-Project Related Fatality
7/28/2010	GPC	FERC	Report of a Non-Project Related Injury
6/10/2011	GPC	FERC	Report of a Non-Project Related Fatality (Drowning)
6/3/2013	GPC	FERC	Non-Project Related Boating Accident
6/4/2013	GPC	FERC	Additional Information RE. Non-Project Related Boating Accident
7/2/2013	GPC	FERC	Non-Project Related Drowning at Factory Shoals Park
6/11/2014	GPC	FERC	Non-Project Related Fatality (Drowning)
3/10/2015	GPC	FERC	Non-Project Related Fatality (Drowning)
7/22/2015	GPC	FERC	Non-Project Related Injury
1/19/2017	GPC	FERC	Report of a Non-Project Related Drowning
11/30/2017	GPC	FERC	Report of Non-Project Related Drowning
7/9/2018	GPC	FERC	Non-Project Related Fatality
9/12/2018	SCG	FERC	Report of Safety Related Incident
6/1/2020	GPC	FERC	Non-Project Related Fatality
6/4/2020	FERC	GPC	Acceptance of the Non-Project Related Fatality
8/24/2020	GPC	FERC	Report of Non-Project Related Fatality

Table H41 Emergency Action Plan, Exercises, Status Reports and Update

Document Date	From	То	EAP Subject
3/22/1999	FERC	Licensees	Summary of some of the requirements of Parts 8 & 12 of FERC's 18 Code of Federal Regulations
			Summary of the requirements of Parts 8 and 12 to assist City of Abbeville, SC et al in keeping
2/22/2000	FERC	Licensees	compliance with requirements
3/29/2011	FERC	SCG	Acceptance of the Revised STID and Follow-up Comment
7/22/2009	FERC	Licensees	Reporting Procedures Prior to, During and After Severe Storm Events
10/30/2000	SCG	USGS	Streamflow Gaging Payment
			Mass mailing re FERC Atlanta Regional Office's new telephone number for EAP under P-11286
12/22/1998	FERC	Licensees	et al.
7/17/2001	FERC	Licensees	New FERC Deputy Regional Director
10/10/2008	FERC	Licensees	Change in ARO Management and Address
7/20/1993	GPC	FERC	Annual EAP Drill Report
7/21/1993	GPC	FERC	Revision to EAP Revisions Filing Date
12/9/1993	GPC	FERC	Completion Notification for Annual EAP Drills
12/15/1993	GPC	FERC	EAP Update
1/7/1994	FERC	GPC	Acknowledgement of Revised EAPs
2/3/1994	GPC	FERC	Schedule for EAP Drills
7/7/1994	GPC	FERC	Reschedule EAP Drills Due To Floods
8/17/1994	GPC	FERC	Schedule for EAP Drills
10/27/1994	GPC	FERC	Annual EAP Drill Report
11/28/1994	GPC	FERC	Completion Notification for Annual EAP Drills
12/15/1994	GPC	FERC	Revised EAP
1/24/1995	GPC	FERC	Schedule for EAP Drills
8/29/1995	GPC	FERC	Revised Schedule for EAP Drills
10/6/1995	FERC	GPC	Change in Phone Number for EAPs
11/16/1995	GPC	FERC	Transmittal of Annual EAP Drill Report

Document Date	From	То	EAP Subject
12/6/1995	GPC	FERC	Transmittal of Revised EAPs
2/5/1996	GPC	FERC	EAP Drill Scheduled
7/9/1996	GPC	FERC	Georgia Power Co submits changed dates for EAP drills for Wallace Dam, Sinclair Dam & Lloyd Shoals Dam under P-2413 et al.
9/10/1996	GPC	FERC	Georgia Power submits Report on EAP functional exercise for Lloyd Shoals Dam, P-2336.
12/4/1996	GPC	FERC	Georgia Power Co submits revised emergency action plans
12/26/1996	GPC	FERC	Notice of Completion of EAP Drills and Reports
4/30/1997	GPC	FERC	Annual EAP Drills Scheduled
8/4/1997	GPC	FERC	3 Annual EAP Drills Rescheduled
9/18/1997	GPC	FERC	EAP Drill Report for Lloyd Shoals
12/12/1997	GPC	FERC	Revised EAP
12/29/1997	GPC	FERC	Notice of Completion of EAP Drills and Reports
2/4/2998	FERC	GPC	EAP Reprint
12/1/1998	GPC	FERC	EAP Drill Report for Lloyd Shoals
12/4/1998	FERC	GPC	Revised Chapter 6 of FERC Engineering Guidelines
12/18/1998	GPC	FERC	Revised EAP
12/21/1998	GPC	FERC	Georgia Power submits annual EAP exercises drill completed for 1998 re Morgan Falls Project under P-2237 et al
11/30/1999	GPC	FERC	EAP Drill Report for Lloyd Shoals
11/30/1999	SCG	GDOT	Request for Bridge Deck Elevations
12/20/1999	SCG	FERC	EAP Reprint
12/28/1999	SCG	FERC	Notice of Completion of EAP Drills
3/10/2000	FERC	GPC	Letter Order Accepting Revised EAP
12/15/2000	SCG	FERC	EAP Drill Report for Lloyd Shoals
12/21/2000	SCG	FERC	Revised EAP
12/22/2000	SCG	FERC	Notice of Completion of EAP Drills

Document Date	From	То	EAP Subject
5/18/2001	FERC	Licensees	International Workshop on Emergency Preparedness at Dams
10/1/2001	GPC	FERC	EAP Drill Report for Lloyd Shoals
12/20/2001	GPC	FERC	Revised EAP
1/10/2002	FERC	GPC	Annual Emergency Action Plan Updates
5/28/2002	FERC	Licensees	EAP Reprint Schedule and Forthcoming Update to Engineering Guidelines
7/31/2002	FERC	GPC	Update FERC Personnel on EAP Notification Flowcharts
8/10/2002	SCG	FERC	COMBINED EMERGENCY ACTION PLAN DRILL Report
11/8/2002	SCG	FERC	Notice of Completion of EAP Drills
11/20/2002	FERC	GPC	Acceptance of Notice of Completion of EAP Drills
1/10/2003	FERC	GPC	Acceptance of Revised EAP
11/7/2003	SCG	FERC	EAP Drill Report for Lloyd Shoals
11/20/2003	FERC	GPC	Acceptance of EAP Drill Report for Lloyd Shoals
12/3/2003	FERC	Licensees	Change in Schedule for EAP Functional Exercise s
12/19/2003	SCG	FERC	Revised EAP
12/22/2003	SCG	FERC	Notice of Completion of EAP Drills
1/22/2004	FERC	SCG	Acceptance of Revised EAP
4/12/2004	SCG	FERC	Proposed Functional EAP Drill Schedule
4/30/2004	FERC	SCG	Acceptance of Proposed Functional EAP Drill Schedule
10/8/2004	SCG	FERC	EAP Drill Report for Lloyd Shoals
12/16/2004	SCG	FERC	Revised EAP
1/27/2005	FERC	SCG	Acceptance of the EAP Update and Reprint
9/12/2005	SCG	FERC	Annual EAP Drill Report
11/7/2005	SCG	FERC	Request to Reclassify EAP Drill Reports to CEII
11/18/2005	SCG	FERC	Proposed Changes to EAP Concerning Events that have potential to affect the Saddle Dikes.
12/29/2005	SCG	FERC	Revised EAP and Map Reprint

Document Date	From	То	EAP Subject
1/26/2006	FERC	SCG	Acceptance of Revised EAP
2/16/2006	FERC	SCG	EAP Exercise Design Course
5/12/2006	FERC	Licensees	Formalization of Requirement to Meet Annually with Emergency Responders To Review EAP
12/22/2006	SCG	FERC	Tabletop Drill for Wallace and Sinclair Provide Training Replacement for Annual Drill
12/22/2006	SCG	FERC	Revised EAP
2/8/2007	FERC	SCG	Acceptance of Revised EAP
5/9/2007	GPC	Agencies	Invitation to Participate in the EAP Exercise
6/4/2007	FERC	SCG	Accept Invitation to Participate in the EAP Exercise
6/21/2007	FERC	Licensees	Reminder of Requirement to Meet Annually with Emergency Responders To Review EAP
		Bibb County	
6/28/2007	GPC	EMA	Reminder of Upcoming EAP exercise
8/16/2007	FERC	SCG	EAP Exercise Follow Up Letter and Recommendation
10/27/2007	SCG	FERC	EAP Tabletop Exercise Report
11/19/2007	FERC	Licensees	Plan and Schedule for Preparing Inundation map Files in GIS
11/27/2007	FERC	SCG	Comments on the 7/31/2007 EAP Tabletop Exercise
12/20/2007	SCG	FERC	Revised EAP
1/16/2008	SCG	FERC	Plan and Schedule for Preparing Inundation map Files in GIS
1/23/2008	FERC	SCG	Acceptance of Revised EAP
3/31/2008	FERC	SCG	FERC Accepts Plan and Schedule for Preparing Inundation maps Files in GIS
12/22/2008	SCG	FERC	Emergency Action Plan Status Report
12/22/2008	SCG	FERC	Emergency Action Plan Status Report Transmittal
12/23/2008	SCG	FERC	Digital Maps for EAP
1/21/2009	SCG	FERC	Revised EAP
2/12/2009	GPC	FERC	Revised EAP

Document Date	From	То	EAP Subject
2/12/2009	FERC	SCG	Letter Order Accepting EAP Updates and Status Reports
3/19/2009	FERC	SCG	Acceptance of Revised EAP
3/30/2009	FERC	SCG	Letter Request GPC to Respond to Comments on Inundation Maps
5/19/2009	SCG	FERC	Response to Comments on Digital Inundation Maps for EAP
7/8/2009	FERC	SCG	Letter Accepting Digital Inundation Maps Filed 5/19/2009
8/17/2009	SCG	FERC	Proposed Schedule to Stagger EAP Map Reprints
9/30/2009	FERC	Licensees	Guidance on Assessing Time-Sensitive EAP Documents
10/23/2009	SCG	FERC	Schedule in Response to 9/30/2009 Letter RE Time Sensitive EAP Documents
10/29/2009	FERC	SCG	Acceptance of the 8/17/2009 Schedule Proposed for EAP Map Reprints
12/17/2009	FERC	SCG	Letter Accepting the Schedule to Address 9/30/2009 EAP Letter Requests
12/21/2009	SCG	FERC	Emergency Action Plan Status Report
3/17/2010	FERC	SCG	Acceptance of the EAP Reprints
3/31/2010	SCG	FERC	Revised EAP and Sudden Failure Assessment
5/27/2010	FERC	SCG	Acceptance of EAP Drill Report for Lloyd Shoals
12/21/2010	SCG	FERC	Revised EAP
12/21/2010	SCG	FERC	EAP Status Reports
			Requirement to Conduct a Functional Exercise of the EAP and Invitation to Participate in an
3/29/2011	FERC	SCG	EAP Design Course
5/4/2011	SCG	FERC	Revised EAP
5/26/2011	FERC	SCG	Acceptance of 5/4/2011 Revised EAP
7/14/2011	FERC	SCG	FERC Rejects Southern Company's March 31, 2011, Letter Proposing Plan and Schedule to Address FERC's 2011 EAP updates and EAP status reports.
12/29/2011	SCG	FERC	Request for Extension of Time to Complete EAP Status Reports and EAP Updates
1/13/2012	SCG	FERC	Southern Company Files EAP Status Report
1/19/2012	FERC	SCG	Letter Order Accepting EOT Request for Annual EAP Status Reports and Updates
2/22/2012	FERC	SCG	Comments on EAP Status Reports

Document Date	From	То	EAP Subject
3/2/2012	SCG	FERC	Response to 2/22/2012 Letter Providing Comments on the EAP Status Report
6/6/2012	FERC	SCG	Acceptance of 3/2/2012 Response to EAP Comments
6/11/2012	SCG	FERC	Invitation to Tabletop and Functional Exercise
10/16/2012	SCG	FERC	Tabletop and Functional Exercise Report
11/8/2012	FERC	SCG	Follow-up Comments on EAP Tabletop and Functional Exercise
12/19/2012	SCG	FERC	Revised EAP
3/20/2013	FERC	SCG	Plan and Schedule for Individual Dam-breaks
5/2/2013	FERC	SCG	Response to EAP Status Reports and Updates - Does Not Appear Related to LS Project
5/6/2013	FERC	Licensees	Guidelines Describing Flood Operations Re. EAP
6/2/2013	SCG	FERC	Response to 3/20/2013 Letter Individual Dam Breaks
6/19/2013	FERC	SCG	Letter Order Accepting 5/2/13 Response to EAP Status Reports and Updates
12/20/2013	SCG	FERC	Revised EAP
12/20/2013	SCG	FERC	EAP Status Reports
3/25/2014	FERC	GPC	FERC Comments on the most recent EAP Update
4/15/2014	FERC	SCG	Letter Order Requiring EAP Be Revised to Include Legible Maps
12/20/2014	SCG	FERC	Revised EAP
12/22/2014	SCG	FERC	EAP Status Reports
2/6/2015	FERC	SCG	EAP Status and Update Report Comments
2/16/2015	SCG	FERC	Request for Clarification of February 6, 2015, Letter
2/24/2015	FERC	SCG	Comments on Morgan Falls and North Georgia EAP Updates and Exercise Reports
6/12/2015	FERC	SCG	Letter Addressing Comments Regarding the EAPs
7/9/2015	FERC	SCG	Letter Regarding EAP Meeting Notes
10/16/2015	SCG	FERC	Request for EOT to File EAPs on 4/30/2016
11/23/2015	FERC	SCG	Letter Order Granting EOT for EAP Completion
1/11/2016	SCG	FERC	High Flow Event Report
1/25/2016	FERC	SCG	Acceptance of High Flow Event Report

Document Date	From	То	EAP Subject
4/26/2016	SCG	FERC	EAP Status Reports
4/26/2016	SCG	FERC	EAP Updates
6/7/2016	FERC	SCG	Acceptance of the Annual EAP Status Reports
6/13/2016	FERC	SCG	Schedule for a Functional Exercise of the EAP
6/30/2016	FERC	SCG	Acceptance of Revised EAPs and Comments on Inundation Maps
7/29/2016	SCG	FERC	EAP Delivery Logs
9/27/2016	FERC	SCG	Letter Accepting EAP Delivery Logs
12/20/2016	SCG	FERC	Revised EAP
12/20/2016	SCG	FERC	Annual EAP Status Report
1/19/2017	FERC	SCG	Letter Order Accepting Revised EAP
2/1/2017	FERC	SCG	Letter Order Accepting Annual EAP Updates
3/13/2017	SCG	FERC	Proposed Schedule for EAP Exercise
3/29/2017	SCG	FERC	EAP Delivery Logs
6/6/2017	SCG	FERC	Mid-year Revision of the EAP
8/16/2017	FERC	SCG	Acceptance of Mid-year Revisions of the EAP
8/23/2017	SCG	FERC	EAP Tabletop Exercise Report
10/4/2017	FERC	SCG	Acceptance of EAP Tabletop Exercise Report
12/20/2017	SCG	FERC	Annual EAP Status Report
12/20/2017	SCG	FERC	Annual EAP Update
2/26/2018	FERC	SCG	Comments on EAP Updates and Status Reports
3/5/2018	FERC	SCG	FERC Comments Annual EAP Update
3/21/2018	SCG	FERC	Response to EAP Comments
3/23/2018	SCG	FERC	EAP Delivery Log Submittal
5/10/2018	FERC	SCG	Acceptance of Response to Comments on EAP Update
12/20/2018	SCG	FERC	EAP Status Report Transmission Letter
12/20/2018	SCG	FERC	Revised EAP

Document Date	From	То	EAP Subject
12/20/2018	SCG	FERC	EAP Update Transmission Letter
2/13/2019	FERC	SCG	FERC Comments on EAP Updates
3/7/2019	FERC	SCG	FERC Acceptance of EAP Updates
3/29/2019	SCG	FERC	Annual EAP Delivery Log
4/2/2019	FERC	SCG	FERC Acceptance of EAP Delivery Log
4/26/2019	SCG	FERC	High Flow Event Report
5/1/2019	FERC	SCG	FERC Acceptance of High Flow Event Report
12/20/2019	SCG	FERC	EAP Status Report
2/20/2020	FERC	SCG	Acceptance of 12/20/2019 EAP Status Report
3/26/2020	SCG	FERC	EAP Delivery Log
5/5/2020	FERC	SCG	Acceptance of EAP Revisions 4/10/2020
12/18/2020	SCG	FERC	Annual EAP Status Report
12/18/2020	SCG	FERC	EAP Transmittal Letter
4/10/2021	SCG	FERC	Mid-year Revision of the EAP

Table H42 5 Year Inspections and Corrective Actions

Document Date	From	То	Part 12 Subject
6/30/1993	FERC	GPC	Comments on Part 12 Report and Corrective Actions
7/15/1993	GPC	FERC	Part 12 5-Year Dam Safety Inspection Report
8/11/1993	GPC	FERC	Part 12 Inspection Recommendations Corrective Actions Plan and Schedule
11/30/1993	GPC	FERC	Part 12 Corrective Actions Plan and Schedule Update
4/21/1994	FERC	GPC	Requirement to Submit Corrective Action Plan and Schedule
4/29/1994	GPC	FERC	Part 12 Inspection Recommendation Corrective Actions Plan and Schedule Update
5/13/1994	FERC	GPC	Comment on Part 12 Recommendation Update
7/1/1994	GPC	FERC	Part 12 Consultant's Resume
7/13/1994	FERC	GPC	Approval of Part 12 Consultant
10/3/1994	GPC	FERC	Corrective Action Plan and Schedule for Power and Communication Lines
1/12/1995	GPC	FERC	6th Part 12 Report
3/13/1995	GPC	FERC	Part 12 Inspection Recommendations Corrective Actions Plan and Schedule
4/5/1995	FERC	GPC	Acknowledgement of Part 12 Filings
6/28/1995	FERC	GPC	Comments on 6th Part 12 Inspection Report
8/5/1998	GPC	FERC	5-Year Inspection independent Consultant
8/21/1998	FERC	GPC	Approval of 5-Year Inspection independent Consultant
3/22/1999	FERC	Licensees	summary of some of the requirements of Parts 8 & 12 of FERC's 18 Code of Federal Regulations
12/29/1999			7th Part 12 Safety Inspection
12/29/1999	SCG	FERC	7th Part 12 Safety Inspection
			summary of the requirements of Parts 8 and 12 to assist City of Abbeville, SC et al in keeping
2/22/2000	FERC	Licensees	compliance with requirements
2/23/2000	SCG	FERC	Corrective Action Plan and Schedule Responding to 7th Part 12 Safety Inspection Report
			status of the implementation of the recommendations contained in the Seventh (2000) 5-Year
6/30/2000	GPC	FERC	Inspection Report

Document Date	From	То	Part 12 Subject
10/27/2000	FERC	GPC	Memo discussing the review of the Seventh Part 12 Report
10/27/2000	FERC	SCG	Acceptance of 7th Part 12 Safety Inspection Report
			Status Update: Corrective Action Plan and Schedule Responding to 7th Part 12 Safety
4/30/2001	SCG	FERC	Inspection Report
7/24/2001	GPC	FERC	Lloyd Shoal Spillway Stability Analysis
7/30/2001	FERC	GPC	Working Group to Develop Performance Monitoring/Potential Failure Modes Analyses Program
9/21/2001	FERC	GPC	FERC Performance Monitoring Program Task Group
10/28/2003	FERC	SCG	Independent Consultant's Safety Inspection Report Due by May 31, 200 4
10/28/2003	TERC	300	
11/24/2003	SCG	FERC	Proposed Schedule for Lloyd Shoals and Morgan Falls Part 12 Safety Inspections
1/16/2004	FERC	SCG	Confirmation of Part 12 and PFMA Schedule
1/21/2004	SCG	FERC	Independent Consultant Resume
2/4/2004	FERC	SCG	Approval of 5-Year Inspection Independent Consultant
2/10/2004	SCG	FERC	Request for Extension of Time to File Part 12 Safety Inspection Report
3/1/2004	FERC	SCG	Approval of Extension of Time Request for the Part 12 Safety Inspection Report
3/11/2004	FERC	SCG	Approval of Extension of Time Request for the Part 12 Safety Inspection Report
8/24/2004	SCG	FERC	Part 12 Safety Inspection Report
			Corrective Action Plan and Schedule for Recommendations of the Part 12 Safety Inspection
10/27/2004	SCG	FERC	Report
2/7/2005	FERC	SCG	Comments on the Part 12 Report and Corrective Action Plan and Schedule
3/7/2005	SCG	FERC	Revised Part 12 Corrective Action Plan and Schedule
3/22/2005	FERC	SCG	Comments on the Revised Part 12 Report and Corrective Action Plan and Schedule
9/21/2005	SCG	FERC	Drilling and Testing Plan Concerning the Condition of the North and South Saddle Dikes
12/1/2005	FERC	SCG	Requirement to Submit a Preliminary Structural Proposal to Prevent Overtopping of Saddle Dikes

Document Date	From	То	Part 12 Subject
1/6/2006	SCG	FERC	Response Concerning Plans to Construct a Structure Prevent Overtopping of Saddle Dikes
1/30/2006	SCG	FERC	Preliminary Plan for Saddle Dike Remediation
4/14/2006	FERC	SCG	Acceptance of Preliminary Plan for Structure to Prevent Overtopping of Saddle Dikes
12/18/2006	SCG	FERC	Status Update Re. Land Acquisition for Saddle Dikes
2/9/2007	SCG	FERC	Status Update Re. Land Acquisition and Construction Schedule for Saddle Dikes
4/6/2007	FERC	SCG	Revised Policy Limiting the Use of One Independent Consultant to Two Consecutive Inspections
5/24/2007	SCG	FERC	Saddle Dike Proposed Investigation Drawing Submittal
8/16/2007	FERC	SCG	FERC Acceptance of Saddle Dike Proposed Investigation Drawing Submittal
11/7/2007	SCG	FERC	Saddle Dike Design Drawings and Technical Specifications
9/16/2008	SCG	FERC	Independent Consultant Resume
9/30/2008	FERC	SCG	Approval of Independent Consultant
11/21/2008	FERC	SCG	Standard Reminder of Part 12 Inspection and Report Expectations
5/22/2009	SCG	FERC	Part 12 Safety Inspection Report
8/21/2009	SCG	FERC	Part 12 Corrective Action Plan and Schedule
1/6/2010	SCG	FERC	Draft STID
1/29/2010	FERC	SCG	Comments on Draft STID
2/19/2010	FERC	SCG	Order Accepting the Ninth Part 12 Safety Inspection Report
8/24/2010	SCG	FERC	Request for Extension of Time to Complete STID
9/23/2010	FERC	SCG	Grant EOT to Complete STID
10/26/2010	FERC	SCG	Meeting Invite Re. Resolution of Outstanding Compliance Items
1/24/2011	FERC	SCG	FERC Grants Ext of Time to Complete the STID
2/22/2011	SCG	FERC	SCG Files the STID
3/29/2011	FERC	SCG	Acceptance of the Revised STID and Follow-up Comment
9/22/2011	SCG	FERC	Revised Exhibit F Drawings
5/28/2013	SCG	FERC	Part 12 Independent Consultant Resume
6/19/2013	FERC	SCG	FERC Approves Part 12 Independent Consultant

Document Date	From	То	Part 12 Subject
5/29/2014	SCG	FERC	10th Part 12 Safety Inspection Report
6/17/2014	GSCG	FERC	Corrective Action Plan and Schedule to Address Recommendations of the Part 12 Report
			FERC Accepts the Corrective Action Plan and Schedule to Address Recommendations of the Part
8/27/2014	FERC	SCG	12 Report
2/19/2015	FERC	SCG	FERC Staff Provides Comments on the Part 12 Inspection Report
2/23/2015	SCG	FERC	Request for Extension of Time to File the STID
3/18/2015	FERC	SCG	FERC Grants Extension of Time to File STID
5/21/2015	SCG	FERC	SCG Files the STID
7/9/2015	FERC	SCG	Comments on the STID
7/22/2015	SCG	FERC	Schedule Dike Modification
9/24/2015	FERC	SCG	East Dike Slope Modification Schedule Acceptance
4/28/2016	SCG	FERC	East Dike Slope Modification Construction Completion Report
6/1/2016	SCG	FERC	Final Construction Report Slope Modification
			Acceptance of East Dike Slope Modification Completion Report and Requirement to File
6/30/2016	FERC	SCG	Updated STID
7/15/2016	SCG	FERC	Request for EOT to File Revised STID
7/28/2016	FERC	SCG	Acceptance of EOT to File STID
11/30/2016	SCG	FERC	Revised STID
6/20/2017	SCG	FERC	Proposed Schedule for 10-year Spillway Gate Inspections
8/16/2017	FERC	SCG	Acceptance of the Proposed Schedule for Spillway Gate Inspections
1/29/2018	SCG	FERC	Annual DSSMR
6/5/2018	SCG	FERC	Part 12 Inspection Schedule and Independent Consultant Resume
6/8/2018	SCG	FERC	Response to Comments on DSSMR
6/22/2018	FERC	SCG	Approval of 5-Year Inspection independent Consultant
1/10/2019	GPC	FERC	Annual Dredging Report

Document Date	From	То	Part 12 Subject
4/8/2019	FERC	SCG	FERC Comments on DSSMR
5/23/2019	SCG	FERC	Part 12 Safety Inspection Report
7/18/2019	SCG	FERC	Plan and Schedule to Address Part 12 Recommendations
5/4/2020	FERC	SCG	Comments on Eleventh Part 12 Inspection Report, PFMA and STID
6/30/2020	SCG	FERC	Response to FERCs Review of Part 12 Inspection Report
7/6/2020	SCG	FERC	Plan and Schedule to Address FERC Comments on Spillway Gates
10/8/2020	FERC	SCG	FERC Accepts Plan and Schedule to Address Recommendations of the Eleventh Part 12 Insp
12/14/2020	SCG	FERC	Request for EOT to Submit STID

Table H43 Annual Dam Safety Surveillance and Monitoring Plan and Reports

Document Date	From	То	DSSMR Subject				
			summary of some of the requirements of Parts 8 & 12 of FERC's 18 Code of Federal				
3/22/1999	FERC	Licensees	Regulations				
			summary of the requirements of Parts 8 and 12 to assist City of Abbeville, SC et al in keeping				
2/22/2000	FERC	Licensees	compliance with requirements				
			FERC States Permit Residential Addition on Project Lands Can Be Done Without Prior				
2/14/2013	FERC	GPC	Commission Approval				
12/28/1998	GPC	FERC	Quarterly Hydro Surveillance Report				
10/20/2000	SCG	FERC	Annual Operation Inspection Follow Up Action Item Piezometer Plots				
4/29/1995	GPC	FERC	Notice of Completion of Installation of Dam Deformation Monuments				
9/14/2012	SCG	FERC	Proposed Changes to Dam Deformation Survey Frequency and Monument Location				
			FERC Comments on Proposed Changes to Dam Deformation Survey Frequency and Monumer				
11/27/2012	FERC	SCG	Location				
3/31/1993	GPC	FERC	Quarterly Instrumentation Data				
6/30/1993	GPC	FERC	Quarterly Instrumentation Data				
9/27/1993	GPC	FERC	Quarterly Instrumentation Data				
12/23/1993	GPC	FERC	Quarterly Instrumentation Data				
3/24/1994	GPC	FERC	Quarterly Instrumentation Data				
6/29/1994	GPC	FERC	Quarterly Instrumentation Data				
7/22/1994	GPC	FERC	Update on Deformation Survey Work				
9/12/1994	GPC	FERC	Update on Deformation Survey Work				
9/28/1994	GPC	FERC	Quarterly Instrumentation Data				
12/21/1994	GPC	FERC	Quarterly Instrumentation Data				
1/26/1995	GPC	FERC	Completion of Initial Deformation Monitoring				
3/30/1995	GPC	FERC	Quarterly Instrumentation Data				
6/29/1995	GPC	FERC	Quarterly Instrumentation Data				
9/28/1995	GPC	FERC	Quarterly Instrumentation Data				

Document Date	From	То	DSSMR Subject					
10/27/1995	FERC	GPC	Comments on Quarterly Instrumentation Data Report					
12/22/1995	GPC	FERC	Quarterly Instrumentation Data					
1/30/1996	GPC	FERC	drawing showing current pore pressure monitoring program instrument locations at Lloyd Shoals Dam					
2/14/1996	GPC	FERC	Georgia Power Co submits Lloyd Shoals Dam current pore pressure monitoring program instrument locations, GPC Drawing 11503 E67					
3/27/1996	GPC	FERC	Hydro Surveillance Report					
6/24/1996	GPC	FERC	Hydro Surveillance Report					
9/26/1996	GPC	FERC	Hydro Surveillance Report					
12/26/1996	GPC	FERC	Hydro Surveillance Report					
6/27/1997	GPC	FERC	Hydro Surveillance Report					
9/30/1997	GPC	FERC	Hydro Surveillance Report					
12/31/1997	GPC	FERC	Hydro Surveillance Report					
3/31/1998	GPC	FERC	Quarterly Hydro Surveillance Report					
6/30/1998	GPC	FERC	Quarterly Hydro Surveillance Report					
9/30/1998	GPC	FERC	Quarterly Hydro Surveillance Report					
3/31/1999	SCG	FERC	Quarterly Hydro Surveillance Report					
6/30/1999	GPC	FERC	Quarterly Hydro Surveillance Report					
9/30/1999	GPC	FERC	Quarterly Hydro Surveillance Report					
12/29/1999	SCG	FERC	Quarterly Hydro Surveillance Report					
3/31/2000	SCG	FERC	Quarterly Hydro Surveillance Report					
6/30/2000	SCG	FERC	Quarterly Hydro Surveillance Report					
9/27/2000	SCG	FERC	Quarterly Hydro Surveillance Report					
6/29/2001	SCG	FERC	Quarterly Hydro Surveillance Report					
10/1/2001	GPC	FERC	Quarterly Hydro Surveillance Report					
3/29/2002	GPC	FERC	Quarterly Hydro Surveillance Report					

Document Date	From	То	DSSMR Subject			
7/1/2002	GPC	FERC	Quarterly Hydro Surveillance Report			
9/30/2002	SCG	FERC	Quarterly Hydro Surveillance Report			
12/30/2002	SCG	FERC	Quarterly Hydro Surveillance Report			
1/27/2003	FERC	GPC	Comments on 'Quarterly Hydro Surveillance Report			
3/19/2003	SCG	FERC	Response to Comments on Quarterly Hydro Surveillance Report			
5/2/2003	FERC	SCG	Letter Acknowledging 3/19/2003 Response to Surveillance Report Comments			
5/20/2003	FERC	Licensees	Revised Dam Safety Performance Monitoring Program			
2/6/2004	SCG	FERC	Annual Hydro Plant Instrumentation Report			
4/8/2004	FERC	SCG	Comments on Annual Instrumentation Report			
5/21/2004	SCG	FERC	Response to Comments on Annual Instrumentation Report			
6/24/2004	FERC	SCG	Acceptance of May 21, 2004, Response to Comments on Annual Instrumentation Report			
1/28/2005	SCG	FERC	Annual Instrumentation Report			
3/13/2005	FERC	SCG	Review of 2004 Surveillance Report			
1/19/2006	FERC	Licensees	Instrumentation Report Guidance			
1/30/2006	SCG	FERC	Annual Instrumentation Report			
3/30/2006	FERC	SCG	Acceptance of Surveillance Report			
3/31/2006	FERC	SCG	Criteria Regarding the DSSMR			
1/31/2007	SCG	FERC	Annual Instrumentation Report - DSSMR			
3/22/2007	FERC	SCG	Comments on the DSSMR			
1/31/2008	SCG	FERC	Annual Hydroelectric Plant Instrumentation Report (DSSMR)			
3/17/2008	FERC	Licensees	Dam Safety Surveillance and Monitoring Changes			
12/18/2008	SCG	FERC	Proposal to Submit all DSSMRs on January 31 Annually			
1/28/2009	GPC	FERC	Request for an Extension of Time to Submit DSSMR			
2/19/2009	FERC	SCG	Letter Order Granting EOT to File DSSMR			
4/23/2009	SCG	FERC	Request for an Extension of Time to Submit DSSMR			
5/21/2009	FERC	SCG	Letter Order Accepting Schedule to File DSSMR			

Document Date	From	То	DSSMR Subject			
9/3/2009	SCG	FERC	Request for an Extension of Time to Submit DSSMR			
10/8/2009	FERC	SCG	Order Granting Extension of Time to File DSSMR			
1/29/2010	SCG	FERC	DSSMR			
3/24/2010	FERC	SCG	Comments on the DSSMR			
1/31/2011	SCG	FERC	Annual DSSMR			
3/22/2011	FERC	SCG	Follow-up Comments on the Annual DSSMR			
10/14/2011	FERC	SCG	Letter Requesting GPC File Essential DS Information			
10/31/2011	SCG	FERC	Revised Plan and Schedule for Providing Dam Monitoring Survey Systems Data			
1/23/2012	FERC	SCG	Letter Order Accepting DSSMR			
2/9/2012	FERC	SCG	Letter Order Granting EOT to File DSSMR			
2/17/2012	SCG	FERC	Annual DSSMR			
5/4/2012	FERC	SCG	Comments on the 2011 DSSMR			
6/29/2012	SCG	FERC	2011 DSSMR Reply			
7/26/2012	FERC	SCG	Order Accepting the 2011 DSSMR			
1/7/2013	SCG	FERC	Final Proposal Changes to Dam Deformation Survey Frequency and Monument Location			
1/31/2013	SCG	FERC	Annual DSSMR			
3/28/2013	FERC	SCG	Comments Re the Annual DSSMR			
5/3/2013	SCG	FERC	Response to 3/21/13 Letter RE DSSMR			
5/24/2013	SCG	FERC	Request for Extension of Time to File Deformation Survey Report			
6/19/2013	FERC	SCG	Letter Order Accepting GPC's 5/2/013 Response to FERC Comments on DSSMR			
6/25/2013	FERC	SCG	FERC Grants Extension of Time to File Deformation Survey Report			
7/23/2013	SCG	FERC	Dam Deformation Survey Analysis and Report			
9/26/2013	FERC	SCG	FERC accepts the Dam Deformation Survey Analysis			
1/31/2014	SCG	FERC	Annual DSSMR			
5/9/2014	FERC	SCG	Plan and Schedule to Revise DSSMR			
5/23/2014	SCG	FERC	Revised DSSMR			

Document Date	From	То	DSSMR Subject			
8/12/2014	FERC	Licensees	New Items for Inclusion in Annual DSSMR			
12/18/2014	SCG	FERC	Request for Extension of Time to File DSSMR			
1/22/2015	FERC	SCG	Letter Order Approving EOT for DSSMR			
1/30/2015	SCG	FERC	DSSMR			
4/14/2015	FERC	SCG	FERC Provides Comments on the DSSMR Review - LS Accepted			
4/14/2016	FERC	SCG	Letter Providing Comments on DSSMR			
1/31/2017	SCG	FERC	Annual DSSMR			
4/7/2017	FERC	SCG	DSSMR Comments			
8/11/2017	FERC	SCG	Acceptance of DSSMR			
5/16/2018	FERC	SCG	Acceptance of DSSMR			
1/30/2019	SCG	FERC	Annual DSSMR			
1/3/2020	SCG	FERC	EOT Request for 2019 Deformation Surveys			
1/31/2020	SCG	FERC	DSSMR			
2/20/2020	FERC	SCG	Order Granting EOT to Complete Deformation Surveys			
3/31/2020	SCG	FERC	Supplement to DSSMR with Results of Deformation Surveys			
4/15/2020	FERC	SCG	Comment on DSSMR			
5/12/2020	FERC	SCG	FERC Comments on the Supplement to DSSMR with Results of Deformation Surveys			
6/15/2020	SCG	FERC	Response to Comments on the DSSMR			
7/2/2020	SCG	FERC	Response to FERC Comment on DSSMR Supplement			
7/20/2020	FERC	SCG	FERC Acceptance of Response to Comments on DSSMR			
7/27/2020	FERC	SCG	FERC Acceptance of Response to Comments on DSSMR			
10/15/2020	FERC	SCG	Trash Gate Inspection Report for Lloyd Shoals			
10/15/2020	SCG	FERC	Revision to Plan and Schedule to Address Comments of the Trash Gate Inspection			

Document Date	From	То	Public Safety Related Subjects						
6/24/1993	GPC	FERC	GPC Files With FERC Revised Public Safety Plan						
9/29/1993	GPC	FERC	GPC Files With FERC Revised Public Safety Plan						
10/22/1993	FERC	GPC	Accept Revised Public Safety Plans						
1/5/1995	GPC	FERC	ublic Safety Plan						
2/9/1995	FERC	GPC	Order Accepting Public Safety Plans						
3/22/1999	FERC	Licensees	Summary of some of the requirements of Parts 8 & 12 of FERC's 18 Code of Federal Regulations						
6/25/1999	FERC	GPC	Environmental and Public Use Inspection Follow up Action Items						
9/15/1999	FERC	GPC	Letter Order Accepting Revised Public Safety Plan						
2/22/2000	FERC	Licensees	Summary of the requirements of Parts 8 and 12 to assist City of Abbeville, SC et al in keeping compliance with requirements						
12/17/2015	SCG	FERC	Updated Public Safety Plan						
5/10/2016	FERC	SCG	Letter Accepting Updated Public Safety Plans						

Table H45 Annual Spillway Gate Certifications

Document Date	From	То	Spillway Gate Certification Subject				
			Summary of some of the requirements of Parts 8 & 12 of FERC's 18 Code of Federal				
3/22/1999	FERC	Licensees	Regulations				
12/30/1999	SCG	FERC	Annual Spillway Gate Operations Reports				
			Summary of the requirements of Parts 8 and 12 to assist City of Abbeville, SC et al in keeping				
2/22/2000	FERC	Licensees	compliance with requirements				
12/17/2004	SCG	FERC	Annual Spillway Gate Operations Reports				
1/31/2005	FERC	SCG	Acceptance of the Annual Spillway Gate Operations Report				
12/14/2012	SCG	FERC	Annual Spillway Gate Operation Reports				
12/30/2013	SCG	FERC	Annual Spillway Gate Certification				
2/27/2014	FERC	SCG	Letter Discussing Annual Spillway Gate Test Certification				
12/16/2014	SCG	FERC	Annual Spillway Gate Certification				
1/21/2015	FERC	SCG	Comments on the Annual Spillway Gate Certification				
2/19/2015	FERC	SCG	Letter Discussing the Annual Spillway Gate Certification				
12/14/2015	SCG	FERC	Annual Spillway Gate Certification				
12/15/2016	SCG	FERC	Annual Spillway Gate Certification				
2/15/2017	FERC	SCG	Letter Accepting Annual Spillway Gate Certifications				
2/15/2017	FERC	SCG	Letter Accepting Annual Spillway Gate Certifications				
12/12/2017	SCG	FERC	Annual Spillway Gate Certification				
2/5/2018	FERC	SCG	Acceptance of Spillway Gate Test				
12/20/2018	SCG	FERC	Annual Spillway Gate Certification				
2/13/2019	FERC	SCG	FERC Acceptance of Spillway Gate Tests				
2/13/2019	FERC	SCG	FERC Acceptance of Spillway Gate Tests				
2/13/2019	FERC	SCG	FERC Acceptance of Spillway Gate Tests				
2/13/2019	FERC	SCG	FERC Acceptance of Spillway Gate Tests				
2/13/2019	FERC	SCG	FERC Acceptance of Spillway Gate Tests				
4/29/2019	SCG	FERC	Response to FERC Comments on Annual Gate Certification				

Document Date	From	То	Spillway Gate Certification Subject				
5/29/2019	FERC	SCG	Acceptance of Annual Gate Certification Letter				
12/30/2019	SCG	FERC	Annual Spillway Gate Certification				
3/4/2020	FERC	SCG	Acceptance of Spillway Gate Cert				
12/21/2020	SCG	FERC	Annual Spillway Gate Certification				

able H46 Security Sec	From	То	Security Submittals Subject					
Document Date	FIOIII	10	· · ·					
12/10/1998	FERC	Licensees	Letter discussing potential serious problems related in critical computer-controlled systems re City of Abbeville, SC's Proj-11286 et al.					
			Y2K Readiness					
11/30/1999	FERC	GPC						
10/17/2001	FERC	Licensees	Request For Confirmation of a Security Assessment					
11/7/2001	GPC	FERC	Confirmation of Security Measures and Assessments					
11/21/2001	FERC	Licensees	Dam Hazard Potential and Considerations for Additional Security Measures					
12/12/2001	GPC	FERC	Response to Dam Hazard Potential and Considerations for Additional Security Measures					
6/7/2002	FERC	GPC	FERC Initiates Security Program for Hydropower Projects					
11/18/2002	FERC	GPC	Security Assessment Reports or Plan and Schedule to Conduct Security Assessments					
12/13/2002	SCG	FERC	Schedule to Conduct Security Assessments					
2/4/2003	FERC	GPC	Soliciting Continued Participation with the FERC Security Program for Hydropower Task Force					
3/5/2003	FERC	GPC	Reminder of Security Assessment Deadline					
9/29/2003	SCG	FERC	Security Assessment Complete and Development of Security Plans					
1/16/2009	FERC	Licensees	Proposed Changes to Hydro Security Program					
1/23/2009	FERC	Licensees	Letter Addressing Recommendations from the Security and Vulnerability Assessments					
6/3/2009	FERC	GPC	Security Program for Hydropower Projects					
1/22/2010	FERC	GPC	Changes in Security Group Classifications					
12/21/2010	GPC	FERC	Security Program Compliance					
3/25/2011	FERC	GPC	Acknowledgement of Annual Security Compliance Certification					
5/30/2012	GPC	FERC	Annual Security Compliance Certification					
6/25/2012	FERC	GPC	Acknowledgement of Annual Security Compliance Certification					
7/8/2012	GPC	FERC	Reply to FERC Information Request on Security Certification					
12/18/2012	GPC	FERC	Annual Security Compliance Certification					
3/20/2013	FERC	GPC	Acknowledgement of Annual Security Compliance Certification					
12/18/2013	GPC	FERC	Annual Security Compliance Certification					
4/3/2014	FERC	GPC	Acknowledgement of Annual Security Compliance Certification					

Document Date	From	То	Security Submittals Subject			
5/1/2014	FERC	GPC	-iling of Security Related Documents			
12/14/2015	GPC	FERC	015 Annual Security Compliance Certification Letter			
12/20/2016	SCG	FERC	nnual Security Certification			
8/18/2017	SCG	FERC	Annual Security Meeting Notes			
12/20/2017	SCG	FERC	Annual Security Compliance Letter			
12/20/2018	SCG	FERC	Annual Security Compliance Letter			
12/20/2019	SCG	FERC	Annual FERC Security Compliance Letter			
9/30/2020	FERC	SCG	FERC Comments on Cybersecurity Audit			
12/17/2020	SCG	FERC	Annual Security Compliance Letter			



Lloyd Shoals Hydroelectric Project FERC Project Number 2336-094

Exhibit H Appendix A

CEII Contains Critical Energy Infrastructure Information Do Not Release

Prepared by

Southern Company Generation Hydro Services

December 2021

Georgia Power Company Lloyd Shoals P-2336 Exhibit H, Appendix A

CEII – Contains Critical Energy Infrastructure Information Do Not Release

Exhibit H, Appendix A contains information about existing and proposed systems and assets, the incapacity of which would negatively affect security, economic security, and public health and safety (critical infrastructure). The critical energy infrastructure information should not be released in accordance with Federal Energy Regulatory Commission regulations found at 18 C.F.R. § 388.112.

The critical energy infrastructure information includes detailed photos of the project during construction periods, derived from engineering documents and transmission system plans. This information: 1) contains details regarding the generation of energy; 2) could be useful to a person planning an attack on critical infrastructure; 3) is exempt from disclosure pursuant to Section (b)(7)(F) of the Freedom of Information Act, 5 U.S.C. § 552(b)(7)(F), by virtue of being "information compiled for law enforcement purposes" to the extent that release of such information "could reasonably be expected to endanger the life or physical safety of any individual"; and 4) does not merely give the location of the critical infrastructure.

See Volume 4 Exhibit H, Appendix A



Lloyd Shoals Hydroelectric Project FERC Project Number 2336-094

Exhibit H Appendix B

Privileged Proprietary/Confidential Information Contains Privileged Information – Do Not Release

Prepared by

Southern Company Generation Hydro Services

December 2021

Contains Privileged Information Do Not Release

Exhibit H, Appendix B contains Documents that include privileged and confidential commercial, financial, and economic information that should not be released in accordance with Federal Energy Regulatory Commission regulations found at 18 C.F.R. § 388.112.

The privileged and confidential information derives economic value from not being generally known to, and not being readily ascertainable by proper means by, other persons who can obtain economic value from their disclosure or use. Additionally, the Documents that contain this privileged and confidential information are subject to extensive efforts by Georgia Power Company (Georgia Power) and Southern Company to maintain their secrecy.

The privileged and confidential information contains pricing information specific to Georgia Power and Southern Company. If revealed to the public, the information would provide valuable insights to the Companies' practices, allowing suppliers and competitors to price products in a manner which would negatively impact the Company's competitive position in a substantial way. This would ultimately cause severe economic harm to Georgia Power and Southern Company and, significantly, their customers. The information is therefore exempt from disclosure pursuant to Section (b)(4) of the Freedom of Information Act, 5 U.S.C. § 552(b)(4).

Only select Georgia Power and Southern Company personnel and their legal counsel are granted access to these Documents that contain privileged and confidential information. Those personnel receive access only on a "need to know" basis. If a party outside Georgia Power and Southern Company and their legal counsel is granted access to the Documents, the party is required to sign a confidentiality agreement with respect to the Documents. Additionally, access to Georgia Power and Southern Company buildings and files is restricted.

See Volume 7 Exhibit H, Appendix B



Lloyd Shoals Hydroelectric Project FERC Project Number 2336-094

Exhibit H Appendix C

Public

Prepared by

Southern Company Generation Hydro Services

December 2021

Georgia Power Company Tower Building, 16th Floor 333 Piedmont Avenue Atlanta, Georgia 30308 Telephone 404 526-7892

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RIMS/RMC



96 JUN 24

TAR

R. L. Boyer Vice President Power Generation

January 2, 1996

Lloyd Shoals Dam FERC Project No. 2336 030 Minimum Flow

Mr. Robert W. Crisp Regional Director Federal Energy Regulatory Commission 3125 Presidential Parkway, Suite 300 Atlanta, Georgia 30340

Dear Mr. Crisp,

In reviewing the 1995 preliminary data from the USGS Jackson gage, station number 02210000, we became aware that the minimum flow requirement of 400 cfs for Lloyd Shoals Dam was not met on July 1, 1995. The flow at the Jackson gage fell to approximately 350 cfs from 7:00 p.m of that evening until about 1:30 a.m. on July 2.

Federal Energy Regulatory Commission

ATLANTA, GEORGIA

04 1996

GPC Central Georgia Hydro Project personnel researched the plant log books and discovered that a trip of a Lloyd Shoals substation transformer at 5:10 p.m. had tripped all units in the powerhouse and had disconnected station service to the powerhouse. Prompt action by Central Georgia Hydro Project personnel placed all units back in service by 3:30 a.m. on July 2.

Attached are plots of flows at the Jacskon gage for the evening of July 1, 1995 through the morning of July 2, and for the period June 30-July 2, 1995.

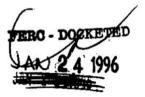
It is our intent to avoid such non-compliances where possible, and to inform you of them in an expeditious manner should they occur.

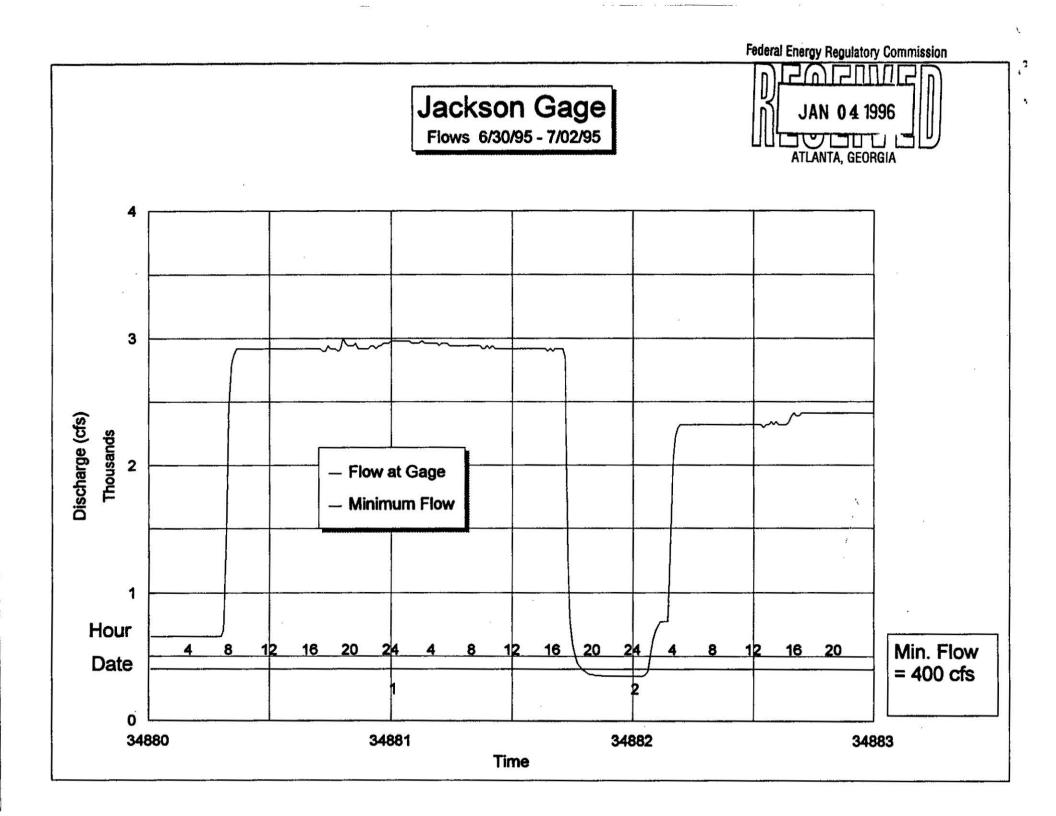
If you have any questions, please call Joel Galt at 526-7033.

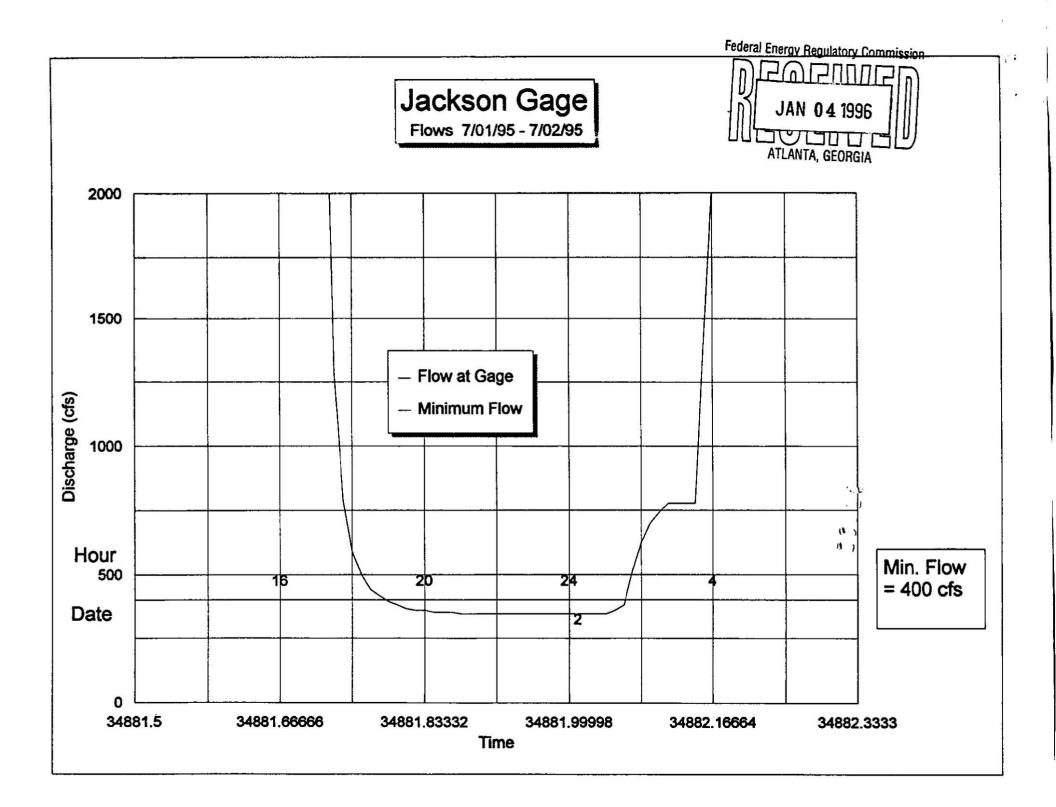
Sincerely,

R. L. Boyer

Attachments 2020033







FEB 0 8 1996

FEDERAL ENERGY REGULATORY COMMISSION

WASHINGTON, D. C. 20426 Project No. 2036 -030 - Georgia Lloyd Shoals Project Georgia Power Company

R.L. Boyer, Vice President Georgia Power Company Tower Building, 16th Floor 333 Piedmont Avenue Atlanta, GA 30308

Dear Mr. Boyer:

We received your letter, dated January 2, 1996, notifying our Atlanta Regional Office of an instance of noncompliance with the required minimum flow release at the Lloyd Shoals Project (FERC No. 2336). Article 402 of the project license requires a continuous minimum flow release from Lloyd Shoals Dam into the Ocmulgee River of 400 cubic feet per second (cfs), or project inflow, whichever is less.

You reported that on July 1, 1995, a trip of a Lloyd Shoals substation transformer resulted in a trip of all units in the powerhouse. This resulted in flow releases of about 350 cfs from about 7:00 p.m on July 1, to about 1:30 a.m. on July 2. We understand that the substation tripped as a result of a transformer malfunction and that prompt action by Georgia Power personnel restored all units to service by 3:30 a.m on July 2.

Based on our review of this information, we have determined that the minimum flow shortfall was precipitated by an unanticipated event beyond your control and that your actions in response to that event were timely and appropriate. Consequently, we will not consider this incident to constitute a violation of your project license.

If you have any questions concerning the foregoing, please contact Dr. John M. Mudre at (202) 219-1208.

Sincerely,

J. Mark Robinso

J. Mark Robinson Director, Division of Project Compliance and Administration

Georgia Power Company Tower Building, 16th Floor 333 Piedmont Avenue Atlanta, Georgia 30308 Telephone 404 526-7892

R. L. Boyer Vice President Power Generation



January 13, 1997

Lloyd Shoals Dam FERC Project No. 2336 Minimum Flow

Mr. Glenny Marshall Acting Regional Director Federal Energy Regulatory Commission 3125 Presidential Parkway, Suite 300 Atlanta, Georgia 30340

Dear Mr. Marshall,

The Lloyd Shoals license requires minimum flow releases of 400 cfs, or inflow. On November 24, 1996, at 12:30 p.m. EST, a plant outage at Lloyd Shoals Dam caused the plant to cease generation. The cause of the outage was a squirrel in the 12 KV bus of the Lloyd Shoals Substation. As a result of this outage the flow in the Ocmulgee River at the Jackson gage dropped to approximately 100 cfs for about one hour. The flow was below 300 cfs for about 4 hours. Unit 4 was returned to service at 3:50 p.m. that day, restoring flow to the river. This information is displayed in the attached graph titled, "Jackson Gage, Flows 11/24/96."

In investigating this event, we became aware that the flows in the Ocmulgee River at the Jackson gage have dropped to a level of approximately 320 cfs on numerous days in late October, November and December of 1996. Due to recent work on Unit 4 to improve efficiency, it became necessary to establish a new minimum power setting to maintain the required minimum flow. In order to do this we had correlated our power output on Unit 4 to manual readings of the staff gage located at the Jackson gage. In making these correlation, we failed to take into account the correction factor used by USGS to modify the raw staff gage data before entering the Jackson gage stage/discharge table. This oversight resulted in our thinking that we were discharging 400 cfs, when we were actually discharging 320 cfs. Graphs showing the flows at the Jackson gage for the months of October, November and December of 1996 are attached.

This situation lasted from October 26, 1996 until January 8, 1997. We have gage data up to December 20, 1996. During the 55 days from October 25 through December 19 the minimum flow fell below the required 400 cfs on 35 days. During this time there were seven days when reservoir inflow fell below the 400 cfs level. The lowest level reached, other than the incident on November 24 described above, was 320 cfs. This is 80% of the required minimum discharge.

January 13, 1997 Lloyd Shoals Dam Minimum Flow

The problem was discovered and corrected on January 8, 1997. On that date the minimum flow power setting for Unit 4 was increased in order to achieve the required 400 cfs minimum flow.

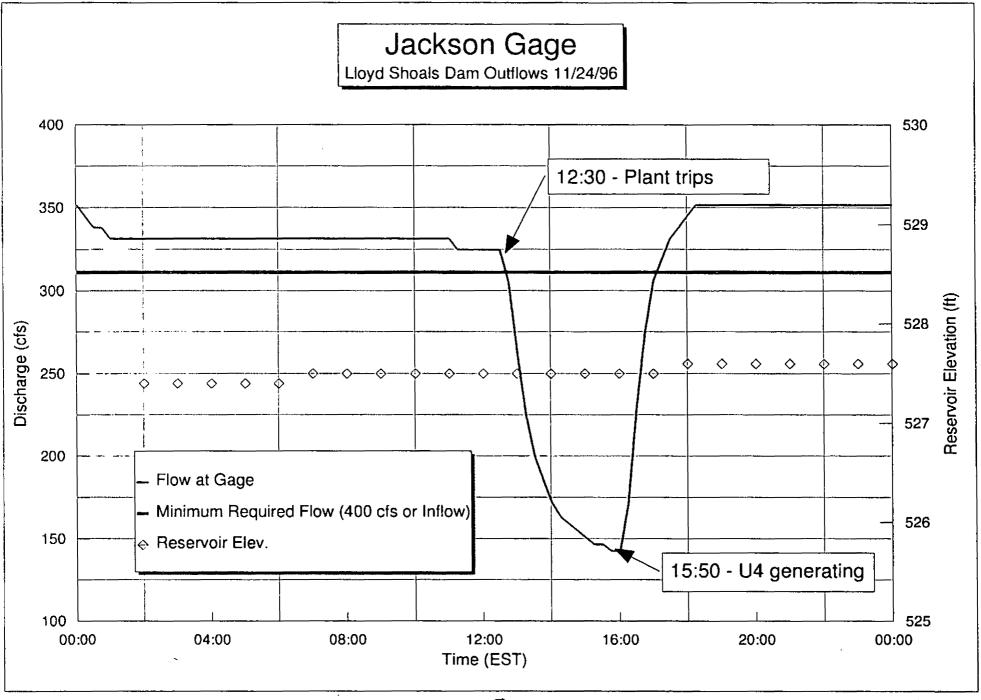
We are planning to conduct a study to better define the relationship between the readings on the USGS Jackson gage, our staff gage downstream of the labyrinth weir, and the power output of Lloyd Shoals generating Unit number 4. We have informed Mr. Russ England of the Georgia Department of Natural Resources of our intent to conduct this study. A copy of our letter to Mr. England is attached.

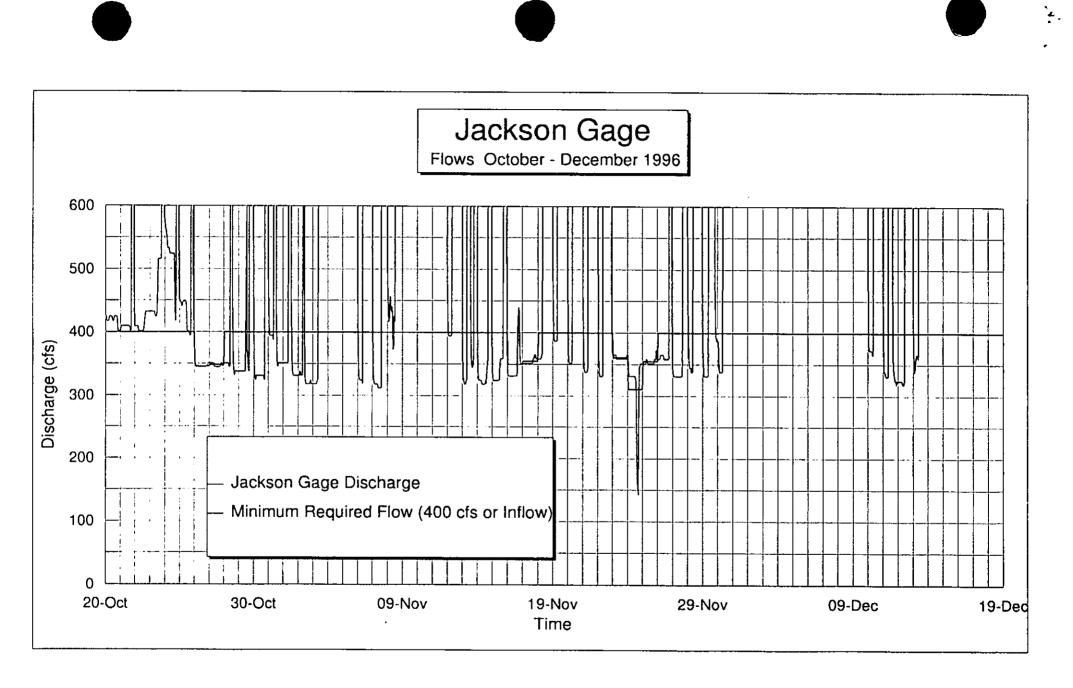
If you have any questions, please call Joel Galt at 526-7033.

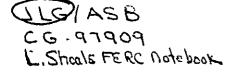
Sincerely,

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R. L. Boyer Attachments /jlg







FEDERAL ENERGY REGULATORY COMMISSION

WASHINGTON, D. C. 20426

Project No. 2336-034--Georgia Lloyd Shoals Project Georgia Power Company

OFFICE OF HYDROPOWER LICENSING

1.3 JUN 1997

W.S.

Mr. R.L. Boyer Georgia Power Company Tower Building, 16th Floor 333 Piedmont Avenue Atlanta, GA 30308

Dear Mr. Boyer:

We received your letter to the Commission's Atlanta Regional Office dated January 13, 1997 reporting an incident that resulted in a minimum flow deficiency on November 24, 1996. The incident occurred at the Lloyd Shoals Project, No. 2336, on the Ocmulgee River. Article 402 requires you to maintain a continuous minimum flow at the project of 400 cubic feet per second (cfs) in the Ocmulgee River below the project, or inflow which ever is less.

Your January 13 letter stated that at 12:30 pm on November 24, a squirrel short-circuited the 12-KV bus at the project substation causing the project to cease generation. The flow of the river dropped to 100 cfs for an hour and below 300 cfs for almost 4 hours. Unit 4 was returned to service at 3:50 pm which restored the flow of the river.

Your personnel worked to correct the minimum flow deficiency caused by the unanticipated power outage without delay. Therefore, we conclude that you were in compliance with the minimum flow requirement of article 401 of your project license.

If you have any questions, please contact Sean C. Murphy at (202) 219-2964.

Sincerely,

Kevin P. Madden Acting Director Office of Hydropower Licensing

cc: Public Files

LS notebook

R. L. Boyer Vice President Power Generation

١,

Bin 10170 241 Ralph McGill Boulevard NE Atlanta, Georgia 30308-3374 Tel 404.506.7892

March 26, 2002



Lloyd Shoals Dam FERC Project No. 2336

Ms. Magalie R. Salas Secretary Federal Energy Regulatory Commission 888 First Street, NE Washington, D.C. 20426

Dear Ms. Salas:

We are writing to inform you of an event relating to the requirements of Article 402 of the FERC license for Lloyd Shoals Dam, FERC Project No. 2336. Article 402 calls for a minimum flow of 400 cfs or inflow to the project if inflows are less than 400 cfs. This article also states that notification should be made to the FERC within 10 days of any divergence from these requirements.

On March 17th and 18th, 2002, the discharge from Lloyd Shoals powerhouse, as measured at the USGS Jackson gage, fell below the minimum flow for a period of about 20 hours. The lowest flow was 373 cfs, 93% of the specified minimum flow.

The cause of this deviation was operator error. On March 17 at 15:00 EST, Unit 1, which was passing the minimum flow, developed a vibration in its thrust bearing. Unit 5 was brought on to pass the minimum flow and Unit 1 was motored. The units are set by power, rather than discharge. Unit 5's characteristics are slightly different from those of Unit 1. For a given megawatt setting, there is slightly less water discharged from Unit 5 than from Unit 1. This difference was not taken into account and resulted in the discharge falling slightly below 400 cfs.

The power settings for passing minimum flow with the various units have been amended. The operators have also been reminded of the necessity of checking the flow at the Jackson gage to assure compliance.

Plant log sheets from January 16th, 17th and 18th and a graph of the USGS gage on the Ocmulgee just downstream of Lloyd Shoals Dam are attached.

As directed, we are providing seven copies of this letter, along with the original. If you have any questions about this report, or if you require further information, please contact Joel Galt at (404) 506-7033.

Sincerely,

Boye

R. L. Boyer

/jlg

Attachments

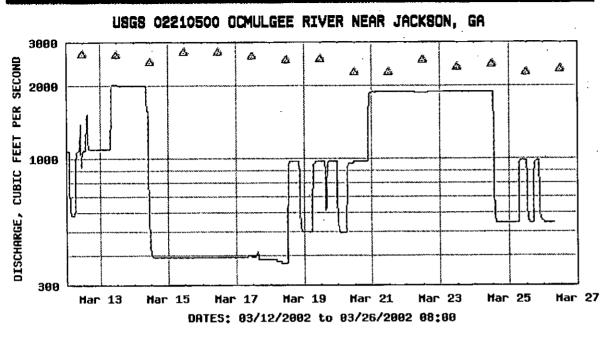
xc: Original and seven copies to the Secretary

One copy to :

Director Division of Hydropower Administration and Compliance 888 1st Street Washington, D. C. 20426

One copy to:

Mr. Jerrold W. Gotzmer Regional Director Federal Energy Regulatory Commission 3125 Presidential Parkway, Suite 300 Atlanta, Georgia 30340 ≥USGS



EXPLANATION

---- DISCHARGE

△ MEDIAN DAILY STREAMFLON BASED ON 51 YEARS OF RECORD

Provisional Data Subject to Revision

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### Lloyd Shoals Log Book



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| 4-5-6           | 81769    | 81769   | 0      |           | 3 8.58,000 |
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| Station Service | 819      | 819     | 0      | 8,090     |            |
| Gross           |          |         | 43.000 | 3023,000  | 13,341,000 |

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| 8    |                       |          |          |          |           |          |     |       |                                        |
| 9    | 527.8                 | 431.1    | 94.1     |          |           |          |     |       |                                        |
| 10   |                       |          |          |          |           |          |     |       |                                        |
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# Lloyd Shoais Log Book Date\_\_\_\_\_\_

|                 | Previous | Present | Day    | Month    | Year J   |
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| 1-2-3           | 98638    | 98644   | 26000  | 226500   | 947,000  |
| 4-5-6           | 81769    | ZINAZ   | 23040  | 792000   | 3491000  |
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| Station Service | 819      | 820     | 1000   | 9 ow     | لا مى    |
| Gross           |          |         | 50 000 | 2473 000 | 13411000 |

| Operator   | On    | Off | Generation | Day     | Month   | Year    |
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|            |       |     | 4          | 0       | 254.50  | 959:50  |
|            |       |     | 5          | 24:00   | 408:02  | 1442.10 |
|            |       |     | 6          | 0       | 0       | 0       |
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|            |       |     | Operation  | Year    | Day     | Total   |
|            |       |     | Hours      | 1880:00 | 24:00   | 1824:00 |

| Time | FB                | TR       | EH         | Time      | Weather    | Temp                           | Day      | Month         | Year        |
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| 2    | 528.6             | 431.1    | 97.        | <b></b>   |            |                                |          |               |             |
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### Lloyd Shoals Log Book

Date 3-18-02

|                 | Previous | Present | Day      | Month    | Year       |
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| 1-2-3           | 98664    | 98681   | 23 000   | 2288000  | 9494000    |
| 4-5-6           | YINGL    | 81848   | 56 000   | 255000   | 394/1000   |
| Net             |          |         | <u> </u> | 3,43000  | 13 illicow |
| Station Service | 820      | 821     | ( 600    | 10000    | 50 000     |
| Gross           |          |         | 80000    | 3153 000 | 13491000   |

| Operator | On | Off | Generation | Day       | Month   | Year    |
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|          |    |     | 4          | 0         | 254:50  | 959.50  |
|          |    |     | 5          | 24:00     | 432:00  | 1471:10 |
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| Time | FB    | TR    | EH | Time     | Weather | Temp     | Day      | Month    | Year     |
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Co/LS notebook

FEDERAL ENERGY REGULATORY COMMISSION Washington, D.C. 20426

OFFICE OF ENERGY PROJECTS

Project No. 2336-050 -- Georgia Lloyd Shoals Project Georgia Power Company

Mr. R. L. Boyer Georgia Power Company Bin 10170 241 Ralph McGill Boulevard, N.E. Atlanta, GA 30308-3374

MAY 2 1 2002

Subject: Compliance with minimum flow requirements of article 402

Dear Mr. Boyer:

We received your March 26, 2002 report regarding a minimum flow deficiency that occurred in March 2002. Article 402 of the license for the Lloyd Shoals Project requires that you release from the Lloyd Shoals Dam, into the Ocmulgee River, a continuous minimum flow of 400 cubic feet per second (cfs), or inflow to the project reservoir.<sup>1</sup>

You indicate in your March 26, 2002 report that, on March 17 and 18, 2002, discharge from the Lloyd Shoals powerhouse, as measured at the U.S. Geological Survey (USGS) gage immediately downstream, fell below the required minimum for a period of approximately 20 hours. The lowest flow measured during the period was 373 cfs.

According to your report, the cause of the flow deficiency was operator error. At 3:00 p.m. on March 17, generation unit 1 was operating and passing the minimum flow to the river downstream. Unit 1 developed a vibration in its thrust bearing, and unit 5 was brought on line to pass the minimum flow while the problem was investigated. The two units vary slightly in the amount of water they pass in developing a given amount of generation, with unit 5 passing slightly less water than unit 1. This was not taken into account by the operator when he brought the units on and off line, resulting in the flow deficiency. You included copies of the powerhouse logbook from the period discussed, and also a chart of provisional flow data from the USGS gage.

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62 FERC ¶ 62,201 (1993).

MEW CP1 MAP RTA Helms PL+ Mgr. -Dmoore 7 Wolm Unin: 10 Ret 5/29/02

You indicated that, when the problem was identified, the power settings necessary for passing the required minimum flows through the project's different units were corrected, and the operator was reminded of the need to check the river flows measured at the USGS gage.

### <u>Conclusions</u>

After examining the available information, we have determined that you violated the minimum flow requirements of license article 402 on March 17 and 18, 2002. The flow reduction was the result of operator error and continued for an extended period of time. However, you have taken adequate steps to ensure similar problems do not recur.

No recommendations of enforcement action or penalties pursuant to section 31 of the Federal Power Act will be made at this time regarding noncompliance with article 402. The noncompliance will be made a part of the compliance history of the project, and will be considered during our review of any future incidents to determine appropriate Commission action.

Thank you for filing your report with us. If you have any questions, please contact Pete Yarrington at (202) 219-2939.

Sincerely,

and to burley

George H. Taylor Chief, Biological Resources Branch Division of Hydropower Administration and Compliance

CG NB

Southern Company Generation and Energy Marketing Bin 10193 241 Ralph McGill Boulevard NE Atlanta, Georgia 30308-3374 Tel 404-506-7033



September 19, 2003

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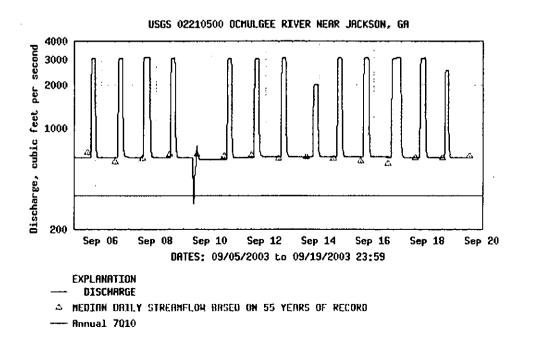
Lloyd Shoals Dam FERC Project No. 2336

Ms. Magalie R. Salas Secretary Federal Energy Regulatory Commission 888 First Street, NE Washington, D.C. 20426

Dear Ms. Salas:

We are writing to inform you of a minor deviation from the minimum flow requirements of the FERC license for Lloyd Shoals Dam, FERC Project No. 2336. Article 402 of the license calls for a minimum flow of 400 cfs or inflow from June through November. This article also calls for notification to be made to the FERC within 10 days of any divergence from the minimum flow requirements.

On September 9, 2003, the discharge from Lloyd Shoals powerhouse, as measured at the USGS Jackson gage, fell below the minimum flow for a period of less than one hour. The lowest flow was 299 cfs, 75% of the specified minimum flow.



The cause of this deviation was a trip of the Lloyd Shoals switchyard caused by a squirrel. That particular squirrel will be unlikely to cause any future non-compliance issues. Rodent guards have been installed on most of the equipment in this switchyard.

As directed, we are providing seven copies of this letter, along with the original. If you have any questions about this report, or if you require further information, please contact Joel Galt at (404) 506-7033.

Sincerely,

۰,

Joel Galt Hydro Services Supervisor

xc: Original and seven copies to the Secretary

One copy to: Mr. Jerrold W. Gotzmer Regional Director Federal Energy Regulatory Commission 3125 Presidential Parkway, Suite 300 Atlanta, Georgia 30340

CGKS NOTEBOOK

Southern Company Generation Bin 10193 241 Ralph McGill Boulevard NE Atlanta, Georgia 30308-3374 Tel 404-506-7033



July 5, 2005

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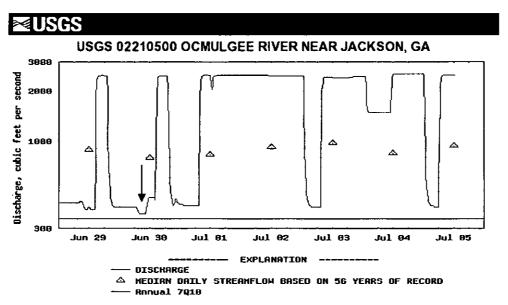
Lloyd Shoals Dam FERC Project No. 2336

Ms. Magalie R. Salas Secretary Federal Energy Regulatory Commission 888 First Street, NE Washington, D.C. 20426

Dear Ms. Salas:

We are writing to inform you of a minor deviation from the minimum flow requirement of the FERC license for Lloyd Shoals Dam, FERC Project No. 2336. Article 402 of the license calls for a minimum flow of 400 cfs or inflow from June through November. This article also calls for notification to be made to the FERC within 10 days of any divergence from the minimum flow requirements.

On June 30, 2005, the discharge from Lloyd Shoals powerhouse, as measured at the USGS Jackson gage, fell below the minimum flow for a period of 4 hours. The lowest flow was 366 cfs, 91.5 % of the specified minimum flow.



**Provisional Data Subject to Revision** 

The cause of this deviation was due to Operator error when switching units.

This report is being filed electronically. If you have any questions about this report, or if you require further information, please contact Joel Galt at (404) 506-7033.

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Sincerely,

Joel Fabr

Joel Galt Hydro Services Supervisor

/rdw

66-05709 J. W. Helins R.D. Wood J.L Masters

FEDERAL ENERGY REGULATORY COMMISSION Washington, D.C. 20426

**OFFICE OF ENERGY PROJECTS** 

Project No. 2336-061 – Georgia Lloyd Shoals Project Georgia Power Company

Mr. Joel Galt Georgia Power Company Bin 10193 241 Ralph McGill Boulevard, N.E. Atlanta, GA 30308-3374

DEC 1 5 2005

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Subject: Compliance with minimum flow requirements of article 402

Dear Mr. Galt:

We received your report, filed July 7, 2005, regarding a minimum flow deficiency that occurred at the Lloyd Shoals Dam (FERC No. 2336). Article 402 of the license<sup>1</sup> for the Lloyd Shoals Project requires that you release from the Lloyd Shoals Dam, into the Ocmulgee River, a continuous minimum flow of 400 cubic feet per second (cfs), or inflow to the project reservoir.

You indicate in your report that, on June 30, 2005, discharge from the Lloyd Shoals powerhouse, as measured at the U.S. Geological Survey (USGS) gage immediately downstream, fell below the required minimum for a period of approximately 4 hours. The lowest flow measured during the period was 366 cfs.

According to your report, the cause of the flow deficiency was operator error. You did not provide details regarding the incident other than that it occurred when switching units. You did include a chart of provisional flow data from the USGS gage.

We note that a similar incident occurred in 2002. You indicated that your generating units vary slightly in the amount of water they pass in developing a given amount of generation. When the problem was identified during that incident, the power settings necessary for passing the required minimum flows through the project's different units were corrected, and the operator was reminded of the need to check the river flows measured at the USGS gage. We recommend that you review the power settings and again remind operators to check the river flows measured at the USGS gage to ensure that flow deficiencies do not recur.

<sup>1</sup> 62 FERC ¶ 62,201 (1993).

After examining the available information, we will not consider the flow deficiency on June 30, 2005, to be a violation of license article 402. While the flow reduction was the result of operator error and could be considered a violation, the deficiency was relatively minor and was limited to four hours. No recommendations of enforcement action or penalties pursuant to section 31 of the Federal Power Act will be made at this time regarding noncompliance with article 402. However, the noncompliance may be considered during our review of any future incidents to determine appropriate Commission action, and future incidents of a similar nature may be considered violations of your license.

Thank you for filing your report with us. If you have any questions, please contact Henry Woo at (202) 502-8872.

Sincerely,

William Guery Le

William Guey-Lee Chief, Engineering and Jurisdiction Branch Division of Hydropower Administration and Compliance

Southern Company Generation Bin 10193 241 Ralph McGill Boulevard NE Atlanta, Georgia 30308-3374 Tel 404-506-7033



December 27, 2007

<u>Lloyd Shoals Dam</u> FERC Project No. 2336 Minimum Flow Provision Deviation

Ms. Kimberly D. Bose Secretary Federal Energy Regulatory Commission 888 First Street, NE Washington, D.C. 20426

Dear Ms. Bose:

We are writing to inform you of several deviations from the minimum flow requirement of the FERC license for Lloyd Shoals Dam, FERC Project No. 2336. Article 402 of the license calls for a minimum flow of 400 cfs or inflow, whichever is less. This article also calls for notification to FERC within 10 days of any divergence from the minimum flow requirements.

On Thursday, December 20, 2007, while evaluating a recent rainfall event, it was determined that inflows rose above 400 cfs without a corresponding increase in the minimum flow release. The evaluation was extended to the beginning of the year and it was determined that the plant had on average been releasing approximately 315 cfs from Lloyd Shoals powerhouse for a period beginning in mid August 2007, as measured at the USGS Jackson gage (Ocmulgee River at Jackson 02210500). For most of the duration, this release was adequate because the calculated inflows were approximately either at or less than 315 cfs because of the severe drought that the southeastern United States is experiencing.

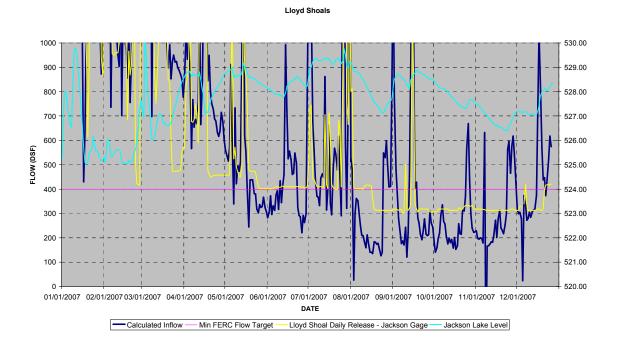
However, there were four brief rainfall events when the inflows reached greater than 400 cfs and the plant continued to release the 315 cfs average. In these cases, Lloyd Shoals should have increased the flows from 315 cfs to 400 cfs.

Last week, we evaluated the spreadsheet that we use to calculate the inflows. The calculator uses five different USGS gages to estimate the inflow into the reservoir. Apparently, this calculator adequately estimates inflows into Lloyd Shoals during normal rainfall years; however, during this drought it does not adequately capture the effect of local, ungaged runoff, which comprises a greater percentage of inflows into the project during a drought.

<u>Lloyd Shoals Hydro</u> FERC Project No. 2236 Minimum Flow Provision Deviation December 27, 2007

Therefore, the inflow calculator was revised late last week and put into use December 21, 2007. The new inflow calculator uses hourly lake level elevations and calculates a change in storage. These hourly storage changes are then averaged for 24 hours to come up with a daily change in storage at Lake Jackson. This daily storage change plus the daily Jackson gage flow equals the calculated inflow.

We believe the new inflow calculator will more accurately estimate inflows into the Lloyd Shoals project. Attached is a graph showing the calculated inflow using the new inflow calculator for all of 2007. The data is graphed with the minimum flow target (400 cfs), the Lake Jackson lake level, and the actual release from the Lloyd Shoals project as measured at the Jackson gage. As you can see, there were four rainfall events since mid August that caused a spike in inflow greater than 400 cfs, and we maintained the Lloyd Shoals release at approximately 315 cfs. However, it is also important to note the many times that the calculated inflows were substantially less than 400 cfs (~200 to 250 cfs for most of September, October, and November 2007); during these periods the project was actually supplementing downstream flows by releasing the 315 cfs. The FERC license would have allowed us to decrease our outflows to match inflows in these cases.



Lloyd Shoals Hydro FERC Project No. 2236 Minimum Flow Provision Deviation December 27, 2007

This report is being filed electronically. If you have any questions about this report, or if you require further information, please contact me at (404) 506-7033.

Sincerely,

Joel Falt

Joel Galt Hydro Services Supervisor

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FEDERAL ENERGY REGULATORY COMMISSION Washington, D.C. 20426

CG-08909 CG corres Sile J. W. Helms C. G. Brown F. L. Cox F. D. Wood J. L. Masters K. M. Hiers K. M. Hiers

Project No. 2336-069 – Georgia Lloyd Shoals Project Georgia Power Company

Mr. Joel Galt Georgia Power Company Bin 10193 241 Ralph McGill Boulevard, N.E. Atlanta, GA 30308-3374

JUN 26 2008

Subject: Compliance with minimum flow requirements of Article 402

Dear Mr. Galt:

This is in response to your report, filed December 27, 2007, regarding a minimum flow deficiency that occurred at the Lloyd Shoals Project No. 2336. Article 402 of the license<sup>1</sup> for the Lloyd Shoals Project requires that you release from the Lloyd Shoals Dam, into the Ocmulgee River, a continuous minimum flow of 400 cubic feet per second (cfs), or inflow to the project reservoir.

You indicate in your report that, on December 20, 2007, discharge from the Lloyd Shoals powerhouse, as measured at the U.S. Geological Survey (USGS) gage immediately downstream, fell below the required minimum. You further reported four additional minimum flow deficiencies between August 2007 and December 2007 that were identified after a review of flow records. According to your report, the cause of the flow deficiencies was erroneous calculation of the inflows. You indicated that inflows are calculated using data from five different gages. While the calculation adequately estimates inflows during normal rainfall years, it does not adequately capture the effect of local, ungaged runoff, which comprises a greater percentage of inflows during a drought. The implication is that inflows had previously been understated during drought conditions, which may have led you to believe that flow releases were sufficient to meet the minimum requirements. After evaluation of the inflow calculator, you revised the calculator to use the Jackson gage and a calculation of storage change in Lake Jackson. You believe the new calculator will more accurately estimate inflows into the Lloyd Shoals project.

<sup>1</sup> 62 FERC ¶ 62,201 (1993).

After examining the available information, we will not consider the flow deficiencies between August 2007 and December 2007, to be violations of license Article 402. While the flow deficiencies were the result of erroneous calculation of inflow and might be considered violations, the deficiencies occurred during a period of drought when flows were abnormally low. During most of that same period, you released flows greater than the minimum required. You also have taken action to correct the erroneous calculations and revised the calculator to better estimate inflows.

Thank you for filing your report with us. If you have any questions, please contact Henry Woo at (202) 502-8872.

Sincerely

Mohamad Fayyad Engineering Team Lead Division of Hydropower Administration and Compliance

Southern Company Generation Bin 10193 241 Ralph McGill Boulevard NE Atlanta, Georgia 30308-3374 Tel 404-506-7033



August 15, 2012

<u>Lloyd Shoals Dam</u> FERC Project No. 2336 Brief Interruption of Minimum Flow

Ms. Kimberly D. Bose Secretary Federal Energy Regulatory Commission 888 First Street, NE Washington, D.C. 20426

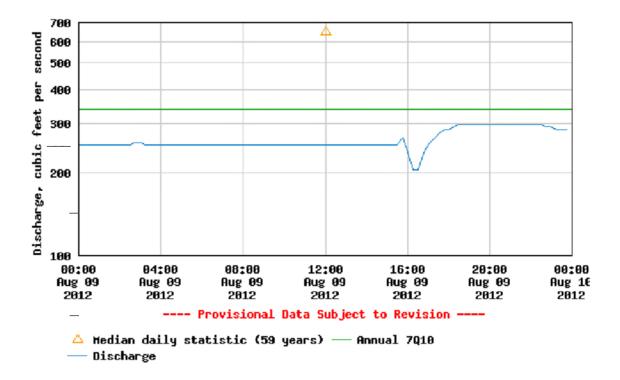
Dear Ms. Bose:

We are writing to inform you of a brief interruption in minimum flow that occurred on Thursday, August 9, 2012 from 4:31 p.m. until 5:10 p.m. at Lloyd Shoals Dam, FERC Project No. 2336.

The incident occurred during inclement weather. All six generating units tripped due to a lightning strike. Because the trip occurred after normal staffing hours, an on-call operator was dispatched to the plant. The operators at Wallace Dam monitor, but cannot remotely restore the Lloyd Shoals generating units after they have tripped. The operator arrived at the site, restored the generating units back to service, starting the minimum flow unit first.

Article 402 of the license calls for a minimum flow of 400 cfs or inflow, whichever is less. This article also calls for notification to FERC within 10 days of any divergence from the minimum flow requirements. Discharge flows are measured at the USGS Jackson gage (Ocmulgee River at Jackson 02210500). A plot (included here) from the USGS website indicates that there was a brief, slight decrease in flows noted at the gage, from about 252 cfs to 205 cfs. The calculated inflow at the time of the interruption in service was approximately 250 cfs. No adverse conditions were reported as a result of this brief flow interruption.

<u>Lloyd Shoals Hydro</u> FERC Project No. 2236 Brief Interruption of Minimum Flow August 15, 2012



If you have any questions about this report, or if you require further information, please contact Courtenay O'Mara at (404) 506-7219.

Sincerely,

Joel Gebr

Joel Galt Hydro Services Supervisor

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CG12909

CG Corres File

H. N. Johnson

J. F. Crew

#### C. G. Brown

.

# J. L. Galt

L. B. Wills

- R. D. Wood
- L. G. Byrnes
- J. L. Masters

T. M. Mayes

#### FEDERAL ENERGY REGULATORY COMMISSION Washington, D. C. 20426

Project No. 2336-078 – Georgia Lloyd Shoals Hydroelectric Project Georgia Power Company

**September 20, 2012** 

Mr. Joel Galt Hydro Services Supervisor Southern Company Bin 10193 241 Ralph McGill Blvd NE Atlanta, GA 30308-3374

OFFICE OF ENERGY PROJECTS

Re: Minimum Flow Deviation Notification

Dear Mr. Galt:

Thank you for your letter filed on behalf of Georgia Power Company on August 16, 2012, in which you reported a minimum flow deviation on August 9, 2012, pursuant to Article 402 of the license for the Lloyd Shoals Hydroelectric Project.<sup>1</sup>

Article 402 requires the licensee to release a continuous minimum flow of 400 cubic feet per second (cfs) from the Lloyd Shoals Dam into the Ocmulgee River, or inflow to the project reservoir, whichever is less. The flow may be temporarily modified if required by operating emergencies beyond the control of the licensee, and for short periods upon agreement between the licensee and the Georgia Department of Natural Resources. If the flow is so modified, the licensee shall notify the Commission as soon as possible, but not later than 10 days after each such incident.

According to your report, a deviation due to a lightning strike occurred between 4:31 p.m. and 5:10 p.m. on August 9, 2012. The minimum flow deviation ceased when the on-call plant staff member was able to restart the turbine. The lowest recorded flow at the downstream U.S. Geological Survey Ocmulgee River at Jackson gage (USGS 02210500) was 205 cfs, or approximately 47 cfs below inflow.

Based on our review, we will not consider the deviation a violation of the project license. No adverse environmental impacts were reported, the deviation appears to be a

<sup>1</sup> 62 FERC ¶ 62,201 (1993).

Project No. 2336-078

result of a weather event beyond your control, and your notification adequately fulfills the license requirements.

Thank you for notifying the Commission of the deviation. If you have any questions regarding this letter, please contact Christopher Chaney at (202) 502-6778.

Sincerely,

William Guey-Lee

William Guey-Lee Chief, Engineering Resources Branch Division of Hydropower Administration and Compliance Southern Company Generation Bin 10193 241 Ralph McGill Boulevard NE Atlanta, Georgia 30308-3374 Tel 404-506-7033



January 7, 2013

<u>Lloyd Shoals Dam</u> FERC Project No. 2336 Brief Interruption of Minimum Flow

Ms. Kimberly D. Bose Secretary Federal Energy Regulatory Commission 888 First Street, NE Washington, D.C. 20426

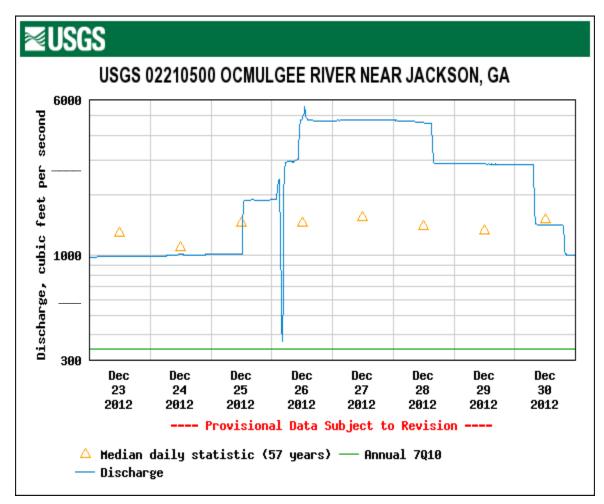
Dear Ms. Bose:

We are writing to inform you of a brief interruption in minimum flow that occurred on Wednesday, December 26, 2012 at Lloyd Shoals Dam, FERC Project No. 2336.

On December 26<sup>th</sup> at 3:09 am EST, with five units loaded and passing approximately 2410 cfs, the entire Lloyd Shoals plant tripped due to an issue in the substation. An operator was called out and one unit was back in service by 4:00 am EST. By 4:30 am EST five units were back on-line. A sixth unit was later put on-line. There had been significant flow in the river for several days prior to this trip with flow increasing as units were added in the hours just prior to the trip. During the time that the entire plant was off, the lowest flow at the gage was approximately 373 cfs. For about 51 minutes Lloyd Shoals' discharge was slightly less than the required minimum flow. At the end of this short interval flows were restored to approximately 3000 cfs.

Article 402 of the Lloyd Shoals FERC license calls for a minimum flow of 400 cfs or inflow, whichever is less. This article also calls for notification to FERC within 10 days of any divergence from the minimum flow requirements. Discharge flows are measured at the USGS Jackson gage (Ocmulgee River at Jackson 02210500). A plot (included here) from the USGS website indicates that there was a brief decrease in flows noted at the gage, from about 2410 cfs to 373 cfs. No adverse conditions were reported as a result of this brief flow reduction.

<u>Lloyd Shoals Hydro</u> FERC Project No. 2236 Brief Interruption of Minimum Flow January 7, 2013



If you have any questions about this report, or if you require further information, please contact Ron Wood at (404) 506-7307.

Sincerely,

Joel I Galt

Joel L. Galt, P.E. Hydro Services Supervisor Southern Company Generation

/rdw



Southern Company Generation 241 Ralph McGill Boulevard, NE BIN10193 Atlanta, Georgia 30308-3374 404 506 7219 tel

August 14, 2017

<u>FERC Project No. 2336</u> Lloyd Shoals Hydro Project Article 402 – Minimum Flow

Ms. Kimberly D. Bose, Secretary Federal Energy Regulatory Commission 888 First Street, N.E. Washington, D.C. 20426

Dear Ms. Bose:

Georgia Power Company (Georgia Power) operates its Lloyd Shoals Project (FERC No. 2354) in accordance with a license issued by the Federal Energy Regulatory Commission (FERC). Article 402 of the Lloyd Shoals license requires from Lloyd Shoals dam a continuous minimum flow of 400 cubic feet per second (cfs), or inflow to the project reservoir, whichever is less. Compliance with this requirement is measured at the USGS gage 02210500 Ocmulgee River Near Jackson, GA.

On August 4, 2017, flow measured at the Ocmulgee River Near Jackson, GA gage dropped below the required 400 cfs, for approximately 90 minutes from 12:45 through 2:15 pm (see table below). As soon as it was discovered that minimum flow was not being met, immediate action was taken to load another unit to restore minimum flow and this unit (Unit 3) was taken offline for investigation.

| 110.00  |                |          |           |
|---------|----------------|----------|-----------|
| USGS    |                |          |           |
| Gage    |                |          | Discharge |
| Number  | Date / Time    | Timezone | (cfs)     |
| 2210500 | 8/4/2017 12:30 | EDT      | 449       |
| 2210500 | 8/4/2017 12:45 | EDT      | 387       |
| 2210500 | 8/4/2017 13:00 | EDT      | 325       |
| 2210500 | 8/4/2017 13:15 | EDT      | 287       |
| 2210500 | 8/4/2017 13:30 | EDT      | 258       |
| 2210500 | 8/4/2017 13:45 | EDT      | 241       |
| 2210500 | 8/4/2017 14:00 | EDT      | 225       |
| 2210500 | 8/4/2017 14:15 | EDT      | 306       |
| 2210500 | 8/4/2017 14:30 | EDT      | 441       |

Southern Company's Technical Field Services and Georgia Power's Instrumentation and Controls groups performed programing and hardware investigation found no errors that would have caused an inadvertent closing of the wicket gates. After results of instrumentation and controls investigations were received, the plant team deduced the error causing Unit 3's wicket gates to close was a result of an operator input "0%" rather than the intended "40%" wicket gate opening in the plant's gate setting SCADA system. Throughout

Ms. Kimberly Bose August 14, 2017 Page 2

the morning, the plant operator had been making small adjustments to the Unit 3 wicket gate opening to carefully reduce minimum flow from approximately 470 cfs to more closely match the minimum flow target of 400 cfs. At 11:24 a.m. this adjustment was made again and this is when the wicket gate setting was incorrectly entered. At 12:55 p.m., which was the next time the operator went to make a wicket gate adjustment, the operator realized flow from the plant had been reduced below the minimum flow requirement and the wicket gate opening was set to 0%. There is about a 1-hour lag time before flow changes at the plant show up at the USGS gage.

The following corrective actions listed below will be implemented immediately to prevent interruptions in minimum flow releases in the future.

Corrective actions include:

- 1. Employee Training: Emphasis on adjusting wicket gate openings and verification of adjustment
- 2. Program Modifications of SCADA system:
  - a) to print out any new set points every time an adjustment is made;
  - b) increase the size of the input block on the SCADA screen to avoid erroneous inputs; and
  - c) add a second SCADA monitor to the control room. Currently, the Sinclair Project (FERC Project No. P-1951) and the Lloyd Shoals Project are operated from a shared screen, requiring operators to choose which project to view. An additional monitor will provide a 24/7 view of SCADA settings of each Project, allowing erroneous inputs to be onscreen and more apparent.
- 3. Alarms: Installation of "no flow" alarm to each unit at Lloyd Shoals to alert operator when a unit is online, not motoring, and wicket gates are at "0%" (If online a unit should either be motoring or passing flow.)

We are notifying the Georgia DNR of the interruption of minimum flow by copy of this letter. We have not been made aware of any adverse environmental impacts because of this event. If you require additional information, please contact me at 404-506-7219 or by email at cromara@southernco.com.

Sincerely,

Loutinay R. O'Mara

Courtenay R. O'Mara, P.E. Hydro Licensing & Compliance Supervisor

cc: H. Steve Hocking – FERC DHAC Wayne King, Will Brown - FERC Atlanta Regional Office Keith Weaver – Georgia DNR Thom Litts – Georgia DNR ATTACHMENT A: RECORD OF AUGUST 4, 2017 15 MINUTE DATA FROM USGS GAGE 2210500 OCMULGEE RIVER NEAR JACKSON, GA

|      | USGS    |               |          |           |
|------|---------|---------------|----------|-----------|
|      | Gage    |               |          | Discharge |
|      | Number  | Date / Time   | Timezone | (cfs)     |
| USGS | 2210500 | 8/4/2017 0:00 | EDT      | 473       |
| USGS | 2210500 | 8/4/2017 0:15 | EDT      | 473       |
| USGS | 2210500 | 8/4/2017 0:30 | EDT      | 473       |
| USGS | 2210500 | 8/4/2017 0:45 | EDT      | 473       |
| USGS | 2210500 | 8/4/2017 1:00 | EDT      | 473       |
| USGS | 2210500 | 8/4/2017 1:15 | EDT      | 473       |
| USGS | 2210500 | 8/4/2017 1:30 | EDT      | 473       |
| USGS | 2210500 | 8/4/2017 1:45 | EDT      | 465       |
| USGS | 2210500 | 8/4/2017 2:00 | EDT      | 465       |
| USGS | 2210500 | 8/4/2017 2:15 | EDT      | 465       |
| USGS | 2210500 | 8/4/2017 2:30 | EDT      | 465       |
| USGS | 2210500 | 8/4/2017 2:45 | EDT      | 465       |
| USGS | 2210500 | 8/4/2017 3:00 | EDT      | 465       |
| USGS | 2210500 | 8/4/2017 3:15 | EDT      | 465       |
| USGS | 2210500 | 8/4/2017 3:30 | EDT      | 465       |
| USGS | 2210500 | 8/4/2017 3:45 | EDT      | 465       |
| USGS | 2210500 | 8/4/2017 4:00 | EDT      | 465       |
| USGS | 2210500 | 8/4/2017 4:15 | EDT      | 465       |
| USGS | 2210500 | 8/4/2017 4:30 | EDT      | 465       |
| USGS | 2210500 | 8/4/2017 4:45 | EDT      | 465       |
| USGS | 2210500 | 8/4/2017 5:00 | EDT      | 465       |
| USGS | 2210500 | 8/4/2017 5:15 | EDT      | 465       |
| USGS | 2210500 | 8/4/2017 5:30 | EDT      | 465       |
| USGS | 2210500 | 8/4/2017 5:45 | EDT      | 465       |
| USGS | 2210500 | 8/4/2017 6:00 | EDT      | 465       |
| USGS | 2210500 | 8/4/2017 6:15 | EDT      | 465       |
| USGS | 2210500 | 8/4/2017 6:30 | EDT      | 465       |
| USGS | 2210500 | 8/4/2017 6:45 | EDT      | 465       |
| USGS | 2210500 | 8/4/2017 7:00 | EDT      | 465       |
| USGS | 2210500 | 8/4/2017 7:15 | EDT      | 465       |
| USGS | 2210500 | 8/4/2017 7:30 | EDT      | 465       |
| USGS | 2210500 | 8/4/2017 7:45 | EDT      | 465       |
| USGS | 2210500 | 8/4/2017 8:00 | EDT      | 465       |
| USGS | 2210500 | 8/4/2017 8:15 | EDT      | 457       |
| USGS | 2210500 | 8/4/2017 8:30 | EDT      | 457       |

| (    | 1       |                |     | 1   |
|------|---------|----------------|-----|-----|
| USGS | 2210500 | 8/4/2017 8:45  | EDT | 457 |
| USGS | 2210500 | 8/4/2017 9:00  | EDT | 457 |
| USGS | 2210500 | 8/4/2017 9:15  | EDT | 457 |
| USGS | 2210500 | 8/4/2017 9:30  | EDT | 457 |
| USGS | 2210500 | 8/4/2017 9:45  | EDT | 457 |
| USGS | 2210500 | 8/4/2017 10:00 | EDT | 457 |
| USGS | 2210500 | 8/4/2017 10:15 | EDT | 457 |
| USGS | 2210500 | 8/4/2017 10:30 | EDT | 457 |
| USGS | 2210500 | 8/4/2017 10:45 | EDT | 449 |
| USGS | 2210500 | 8/4/2017 11:00 | EDT | 449 |
| USGS | 2210500 | 8/4/2017 11:15 | EDT | 449 |
| USGS | 2210500 | 8/4/2017 11:30 | EDT | 449 |
| USGS | 2210500 | 8/4/2017 11:45 | EDT | 449 |
| USGS | 2210500 | 8/4/2017 12:00 | EDT | 449 |
| USGS | 2210500 | 8/4/2017 12:15 | EDT | 449 |
| USGS | 2210500 | 8/4/2017 12:30 | EDT | 449 |
| USGS | 2210500 | 8/4/2017 12:45 | EDT | 387 |
| USGS | 2210500 | 8/4/2017 13:00 | EDT | 325 |
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| USGS | 2210500 | 8/4/2017 14:00 | EDT | 225 |
| USGS | 2210500 | 8/4/2017 14:15 | EDT | 306 |
| USGS | 2210500 | 8/4/2017 14:30 | EDT | 441 |
| USGS | 2210500 | 8/4/2017 14:45 | EDT | 543 |
| USGS | 2210500 | 8/4/2017 15:00 | EDT | 599 |
| USGS | 2210500 | 8/4/2017 15:15 | EDT | 561 |
| USGS | 2210500 | 8/4/2017 15:30 | EDT | 507 |
| USGS | 2210500 | 8/4/2017 15:45 | EDT | 473 |
| USGS | 2210500 | 8/4/2017 16:00 | EDT | 457 |
| USGS | 2210500 | 8/4/2017 16:15 | EDT | 449 |
| USGS | 2210500 | 8/4/2017 16:30 | EDT | 441 |
| USGS | 2210500 | 8/4/2017 16:45 | EDT | 441 |
| USGS | 2210500 | 8/4/2017 17:00 | EDT | 433 |
| USGS | 2210500 | 8/4/2017 17:15 | EDT | 433 |
| USGS | 2210500 | 8/4/2017 17:30 | EDT | 433 |
| USGS | 2210500 | 8/4/2017 17:45 | EDT | 433 |
| USGS | 2210500 | 8/4/2017 18:00 | EDT | 433 |
| USGS | 2210500 | 8/4/2017 18:15 | EDT | 433 |
| USGS | 2210500 | 8/4/2017 18:30 | EDT | 433 |
| USGS | 2210500 | 8/4/2017 18:45 | EDT | 433 |
| USGS | 2210500 | 8/4/2017 19:00 | EDT | 433 |

| USGS | 2210500 | 8/4/2017 19:15 | EDT | 433 |
|------|---------|----------------|-----|-----|
| USGS | 2210500 | 8/4/2017 19:30 | EDT | 433 |
| USGS | 2210500 | 8/4/2017 19:45 | EDT | 433 |
| USGS | 2210500 | 8/4/2017 20:00 | EDT | 433 |
| USGS | 2210500 | 8/4/2017 20:15 | EDT | 433 |
| USGS | 2210500 | 8/4/2017 20:30 | EDT | 433 |
| USGS | 2210500 | 8/4/2017 20:45 | EDT | 433 |
| USGS | 2210500 | 8/4/2017 21:00 | EDT | 433 |
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| USGS | 2210500 | 8/4/2017 21:30 | EDT | 433 |
| USGS | 2210500 | 8/4/2017 21:45 | EDT | 433 |
| USGS | 2210500 | 8/4/2017 22:00 | EDT | 433 |
| USGS | 2210500 | 8/4/2017 22:15 | EDT | 433 |
| USGS | 2210500 | 8/4/2017 22:30 | EDT | 433 |
| USGS | 2210500 | 8/4/2017 22:45 | EDT | 433 |
| USGS | 2210500 | 8/4/2017 23:00 | EDT | 433 |
| USGS | 2210500 | 8/4/2017 23:15 | EDT | 433 |
| USGS | 2210500 | 8/4/2017 23:30 | EDT | 433 |
| USGS | 2210500 | 8/4/2017 23:45 | EDT | 433 |

### FEDERAL ENERGY REGULATORY COMMISSION Washington, D. C. 20426

### OFFICE OF ENERGY PROJECTS

Project No. 2336-093 – Georgia Lloyd Shoals Hydroelectric Project Georgia Power Company

November 15, 2017

Mr. Herbie Johnson Hydropower General Manager Georgia Power Company 600 North 18<sup>th</sup> Street BIN 16N-8180 Birmingham, AL 35203-1359

Subject: Minimum Flow Deviation Pursuant to Article 402

Dear Mr. Johnson:

This letter is in regard to your August 14, 2017 filing of a minimum flow deviation that occurred at your Lloyd Shoals Hydroelectric Project No. 2336. As discussed further below, we have concluded that this deviation is a violation of your project license

Article 402 of your license<sup>1</sup> requires you to release a continuous minimum flow of 400 cubic feet per second (cfs) from the Lloyd Shoals Dam into the Ocmulgee River, or inflow to the project reservoir, whichever is less. The flow may be temporarily modified if required by operating emergencies beyond your control, and for short periods upon agreement between you and the Georgia Department of Natural Resources (Georgia DNR). If the flow is so modified, you are required to notify the Commission as soon as possible, but not later than 10 days after each such incident.

In your filing, you report that on August 4, 2017, you observed that the flow in the Ocmulgee River had dropped below the required 400 cfs for approximately 90 minutes, from 1245 hours to 1415 hours. Upon discovery of the deviation, you took action to load another unit to restore minimum flow, and then took the unit in question (unit 3) offline for investigation. After investigations of instrumentation and controls were performed, you discovered that the operator had mistakenly input a value of 0 percent instead of the

<sup>&</sup>lt;sup>1</sup> Order Issuing New License (62 FERC ¶ 62,201), issued March 22, 1993.

intended value of 40 percent in your plant's gate setting SCADA system. This erroneous input caused the wicket gates on that unit to fully close.

You provide operational data which indicates that the discharge had decreased from 449 cfs to a minimum of 225 cfs during the incident. You state that you have not been made aware of any adverse environmental impacts caused by this event, and that your filing (along with courtesy copies), serves as notification of the incident to the Georgia DNR. You include corrective actions to prevent similar future incidents in your filing, including: 1) employee training; 2) program modifications to your SCADA system; and 3) installation of "no flow" alarms to each unit.

After review of the available information, we have determined that the minimum flow deviation that occurred on August 4, 2017 was caused by operator error when setting the unit's wicket gate value, and could have been prevented. Therefore, we will consider the deviation to be a violation of Article 402 of your project license. The violation will be made a part of the compliance history of the project and considered in the course of review of any future similar deviations to determine appropriate Commission action.

Although you state that you were not made aware of any adverse environmental impacts, it does not appear that any field surveys were conducted after you discovered the flow reduction. For future reporting of incidents, should they occur, please attempt to conduct a field survey in the affected stream reach and document any impacts or lack thereof, or explain why a field survey could not be conducted.

This concludes our review. Thank you for your cooperation. If you have any questions regarding this letter, please contact Brian Bartos via email at brian.bartos@ferc.gov or by telephone at (202) 502-6679.

Sincerely,

Thomas J. LoVullo Chief, Aquatic Resources Branch Division of Hydropower Administration and Compliance



Southern Company Generation 241 Ralph McGill Boulevard, NE BIN10193 Atlanta, Georgia 30308-3374 404 506 7219 tel

May 10, 2018

<u>FERC Project No. 2336</u> Lloyd Shoals Hydro Project Article 402 – Minimum Flow

Ms. Kimberly D. Bose, Secretary Federal Energy Regulatory Commission 888 First Street, N.E. Washington, D.C. 20426

Dear Ms. Bose:

Georgia Power Company (Georgia Power) operates the Lloyd Shoals Project (FERC No. 2354) in accordance with a license issued by the Federal Energy Regulatory Commission (FERC). Article 402 of the Lloyd Shoals license requires from Lloyd Shoals Dam a continuous minimum flow of 400 cubic feet per second (cfs), or inflow to the project reservoir, whichever is less. Compliance with this requirement is measured at the USGS gage 02210500 Ocmulgee River Near Jackson, GA.

On May 1, 2018, flow measured at the Ocmulgee River Near Jackson, GA gage dropped below the required 400 cfs, reaching a minimum discharge of 195 cfs. At 3:23 A.M. EDT the Lloyd Shoals powerhouse experienced a plant-wide outage requiring an investigation of the cause in order to restore service to the plant. A snake was discovered on the 12kV bus in the Lloyd Shoals Hydro substation located to the west of the powerhouse. The snake caused phase 1, 2, and 3 substation differential relaying on bank "A" transformer to operate, causing bus 1 and bus 2 plant undervoltage relaying to operate. This tripped all generating units and shut down the plant, which is the designed response for the protection of essential plant equipment. When the plant operator arrived at the substation issues. Since the substation crew did not completely understand the connectivity between the plant and the substation, the plant operator stayed with the substation service restored to the plant. The emergency generator was not used to operate the trashgate and restore minimum flow sooner because safety and understanding of the substation crew immediately became the primary focus of the plant operator. Minimum flow was reestablished at 6:12 AM EDT.

The table in Appendix A provides the measurements taken at USGS gage 02210500 Ocmulgee River Near Jackson, GA. The discharge readings indicate a deviation below the 400 cfs minimum flow lasted for approximately two hours and 15 minutes, from 4:30 A.M. EDT through 6:45 P.M. EDT. The average discharge on May 1, 2018 was 1,690 cfs.

Wildlife events of this nature are beyond Georgia Power's control. We are notifying the Georgia DNR of the interruption of minimum flow by copy of this letter. We have not observed ourselves or been made aware of any adverse environmental impacts because of this event. Due to the duration of this deviation we would

Ms. Kimberly Bose May 10, 2018 Page 2

not expect any resulting negative impacts. If you require additional information, please Melissa Crabbe at 404-506-7273 or by email at mccrabbe@southernco.com.

Sincerely,

Louting R. O'Mara

Courtenay R. O'Mara, P.E. Hydro Licensing & Compliance Supervisor

H. Steve Hocking - FERC DHAC cc: Wayne King, Will Brown - FERC Atlanta Regional Office Keith Weaver – Georgia DNR Thom Litts - Georgia DNR

# ATTACHMENT A: RECORD OF MAY 1, 2018 15 MINUTE DATA FROM USGS GAGE 2210500 OCMULGEE RIVER NEAR JACKSON, GA

| USGS<br>Gage<br>Number | Date / Time   | Timezone | Discharge<br>(cfs) |
|------------------------|---------------|----------|--------------------|
| 2210500                | 5/1/2018 0:00 | EDT      | 1900               |
| 2210500                | 5/1/2018 0:15 | EDT      | 1900               |
| 2210500                | 5/1/2018 0:30 | EDT      | 1900               |
| 2210500                | 5/1/2018 0:45 | EDT      | 1900               |
| 2210500                | 5/1/2018 1:00 | EDT      | 1900               |
| 2210500                | 5/1/2018 1:15 | EDT      | 1900               |
| 2210500                | 5/1/2018 1:30 | EDT      | 1900               |
| 2210500                | 5/1/2018 1:45 | EDT      | 1900               |
| 2210500                | 5/1/2018 2:00 | EDT      | 1900               |
| 2210500                | 5/1/2018 2:15 | EDT      | 1900               |
| 2210500                | 5/1/2018 2:30 | EDT      | 1900               |
| 2210500                | 5/1/2018 2:45 | EDT      | 1900               |
| 2210500                | 5/1/2018 3:00 | EDT      | 1900               |
| 2210500                | 5/1/2018 3:15 | EDT      | 1900               |
| 2210500                | 5/1/2018 3:30 | EDT      | 1900               |
| 2210500                | 5/1/2018 3:45 | EDT      | 1020               |
| 2210500                | 5/1/2018 4:00 | EDT      | 628                |
| 2210500                | 5/1/2018 4:15 | EDT      | 465                |
| 2210500                | 5/1/2018 4:30 | EDT      | 373                |
| 2210500                | 5/1/2018 4:45 | EDT      | 318                |
| 2210500                | 5/1/2018 5:00 | EDT      | 275                |
| 2210500                | 5/1/2018 5:15 | EDT      | 252                |
| 2210500                | 5/1/2018 5:30 | EDT      | 230                |
| 2210500                | 5/1/2018 5:45 | EDT      | 215                |
| 2210500                | 5/1/2018 6:00 | EDT      | 205                |
| 2210500                | 5/1/2018 6:15 | EDT      | 195                |
| 2210500                | 5/1/2018 6:30 | EDT      | 269                |
| 2210500                | 5/1/2018 6:45 | EDT      | 822                |
| 2210500                | 5/1/2018 7:00 | EDT      | 1500               |
| 2210500                | 5/1/2018 7:15 | EDT      | 1750               |
| 2210500                | 5/1/2018 7:30 | EDT      | 1840               |
| 2210500                | 5/1/2018 7:45 | EDT      | 1880               |
| 2210500                | 5/1/2018 8:00 | EDT      | 1900               |
| 2210500                | 5/1/2018 8:15 | EDT      | 1900               |
| 2210500                | 5/1/2018 8:30 | EDT      | 1900               |
| 2210500                | 5/1/2018 8:45 | EDT      | 1900               |

| 2210500 | 5/1/2018 9:00  | EDT | 1900 |
|---------|----------------|-----|------|
| 2210500 | 5/1/2018 9:15  | EDT | 1900 |
| 2210500 | 5/1/2018 9:30  | EDT | 1900 |
| 2210500 | 5/1/2018 9:45  | EDT | 1900 |
| 2210500 | 5/1/2018 10:00 | EDT | 1900 |
| 2210500 | 5/1/2018 10:15 | EDT | 1900 |
| 2210500 | 5/1/2018 10:30 | EDT | 1900 |
| 2210500 | 5/1/2018 10:45 | EDT | 1900 |
| 2210500 | 5/1/2018 11:00 | EDT | 1900 |
| 2210500 | 5/1/2018 11:15 | EDT | 1900 |
| 2210500 | 5/1/2018 11:30 | EDT | 1900 |
| 2210500 | 5/1/2018 11:45 | EDT | 1900 |
| 2210500 | 5/1/2018 12:00 | EDT | 1900 |
| 2210500 | 5/1/2018 12:15 | EDT | 1900 |
| 2210500 | 5/1/2018 12:30 | EDT | 1900 |
| 2210500 | 5/1/2018 12:45 | EDT | 1900 |
| 2210500 | 5/1/2018 13:00 | EDT | 1900 |
| 2210500 | 5/1/2018 13:15 | EDT | 1900 |
| 2210500 | 5/1/2018 13:30 | EDT | 1900 |
| 2210500 | 5/1/2018 13:45 | EDT | 1900 |
| 2210500 | 5/1/2018 14:00 | EDT | 1900 |
| 2210500 | 5/1/2018 14:15 | EDT | 1900 |
| 2210500 | 5/1/2018 14:30 | EDT | 1900 |
| 2210500 | 5/1/2018 14:45 | EDT | 1900 |
| 2210500 | 5/1/2018 15:00 | EDT | 1900 |
| 2210500 | 5/1/2018 15:15 | EDT | 1900 |
| 2210500 | 5/1/2018 15:30 | EDT | 1900 |
| 2210500 | 5/1/2018 15:45 | EDT | 1900 |
| 2210500 | 5/1/2018 16:00 | EDT | 1900 |
| 2210500 | 5/1/2018 16:15 | EDT | 1900 |
| 2210500 | 5/1/2018 16:30 | EDT | 1900 |
| 2210500 | 5/1/2018 16:45 | EDT | 1900 |
| 2210500 | 5/1/2018 17:00 | EDT | 1900 |
| 2210500 | 5/1/2018 17:15 | EDT | 1900 |
| 2210500 | 5/1/2018 17:30 | EDT | 1900 |
| 2210500 | 5/1/2018 17:45 | EDT | 1900 |
| 2210500 | 5/1/2018 18:00 | EDT | 1900 |
| 2210500 | 5/1/2018 18:15 | EDT | 1900 |
| 2210500 | 5/1/2018 18:30 | EDT | 1900 |
| 2210500 | 5/1/2018 18:45 | EDT | 1900 |
| 2210500 | 5/1/2018 19:00 | EDT | 1900 |
| 2210500 | 5/1/2018 19:15 | EDT | 1900 |

| 2210500 | 5/1/2018 19:30 | EDT | 1900 |
|---------|----------------|-----|------|
| 2210500 | 5/1/2018 19:45 | EDT | 1900 |
| 2210500 | 5/1/2018 20:00 | EDT | 1900 |
| 2210500 | 5/1/2018 20:15 | EDT | 1900 |
| 2210500 | 5/1/2018 20:30 | EDT | 1900 |
| 2210500 | 5/1/2018 20:45 | EDT | 1900 |
| 2210500 | 5/1/2018 21:00 | EDT | 1900 |
| 2210500 | 5/1/2018 21:15 | EDT | 1900 |
| 2210500 | 5/1/2018 21:30 | EDT | 1900 |
| 2210500 | 5/1/2018 21:45 | EDT | 1900 |
| 2210500 | 5/1/2018 22:00 | EDT | 1900 |
| 2210500 | 5/1/2018 22:15 | EDT | 1900 |
| 2210500 | 5/1/2018 22:30 | EDT | 1900 |
| 2210500 | 5/1/2018 22:45 | EDT | 1900 |
| 2210500 | 5/1/2018 23:00 | EDT | 1900 |
| 2210500 | 5/1/2018 23:15 | EDT | 1900 |
| 2210500 | 5/1/2018 23:30 | EDT | 1900 |
| 2210500 | 5/1/2018 23:45 | EDT | 1900 |



Southern Company Generation 241 Ralph McGill Boulevard, NE BIN10193 Atlanta, Georgia 30308-3374 404 506 7219 tel

May 25, 2018

<u>FERC Project No. 2336</u> Lloyd Shoals Hydro Project Article 402 – Minimum Flow

Ms. Kimberly D. Bose, Secretary Federal Energy Regulatory Commission 888 First Street, N.E. Washington, D.C. 20426

Dear Ms. Bose:

Georgia Power Company (Georgia Power) operates the Lloyd Shoals Project (FERC No. 2336) in accordance with a license issued by the Federal Energy Regulatory Commission (FERC). Article 402 of the Lloyd Shoals license requires from Lloyd Shoals Dam a continuous minimum flow of 400 cubic feet per second (cfs), or inflow to the project reservoir, whichever is less. Compliance with this requirement is measured at the USGS gage 02210500 Ocmulgee River Near Jackson, GA (Jackson Gage).

On May 15, 2018, flow measured at the Ocmulgee River Near Jackson, GA gage dropped below the required 400 cfs, reaching a minimum discharge of 352 cfs. From 5:30 P.M. EDT on May 14 through 12:45 A.M. EDT on May 15 a steady flow of 1,750 cfs flow was measured at the Jackson Gage as a result of three-unit operation at the Lloyd Shoals powerhouse. At 12:00 A.M. EDT Lloyd Shoals units were operated to decrease from three-unit operation to release minimum flow. As flows continued to decline closer to the 400 cfs minimum flow threshold, at 4:13 A.M. the operator made attempt in the operating program to adjust wicket gates to stabilize around 400 cfs. The computer-based operating program experienced a glitch and was unresponsive to the operators attempted adjustment to increase the wicket gate setting. This glitch continued for approximately the next ten minutes, finally responding to the operator's inputs around 4:23 A.M. EDT. Due to the glitch, flows measured at the gage dipped below 400 cfs for approximately two hours from 4:30 A.M. to 6:30 A.M. Although the program eventually became responsive, Georgia Power has scheduled an investigation to be conducted by the Southern Company Technical Services - Electrical Field Support group on May 29 to determine the cause of the glitch and whether measures can be taken to prevent similar events from occurring in the future. The table in Appendix A provides the measurements taken at USGS gage 02210500 Ocmulgee River Near Jackson, GA on May 14 and 15, 2018. The average flow at the gage during these two days was 974 cfs and 473 cfs, respectively.

We are notifying the Georgia DNR of the interruption of minimum flow by copy of this letter. We have not observed ourselves or been made aware of any adverse environmental impacts because of this event. Due to the duration of this deviation we would not expect any resulting negative impacts. If you require

Ms. Kimberly Bose May 25, 2018 Page 2

additional information, please contact Melissa Crabbe at 404-506-7273 or by email at mccrabbe@southernco.com.

Sincerely,

Loutinay R. O'Mara

Courtenay R. O'Mara, P.E. Hydro Licensing & Compliance Supervisor

H. Steve Hocking – FERC DHAC cc: Wayne King, Will Brown - FERC Atlanta Regional Office Keith Weaver – Georgia DNR Thom Litts - Georgia DNR

# ATTACHMENT A: RECORD OF MAY 14 AND 15, 2018 15 MINUTE DATA FROM USGS GAGE 2210500 OCMULGEE RIVER NEAR JACKSON, GA

| USGS<br>Gage<br>Number | Date / Time  | Timezone | Discharge<br>(cfs) |
|------------------------|--------------|----------|--------------------|
|                        | F /1 / /2019 |          |                    |
| 2210500                | 5/14/2018    | FDT      | 1750               |
| 2210500                | 0:00         | EDT      | 1750               |
| 2210500                | 5/14/2018    | EDT      | 1750               |
| 2210500                | 0:15         | EDT      | 1750               |
| 2210500                | 5/14/2018    | FDT      | 1750               |
| 2210500                | 0:30         | EDT      | 1750               |
| 2210500                | 5/14/2018    | FDT      | 1750               |
| 2210500                | 0:45         | EDT      | 1750               |
| 2240500                | 5/14/2018    | EDT      | 1750               |
| 2210500                | 1:00         | EDT      | 1750               |
| 224.05.00              | 5/14/2018    | FDT      | 1670               |
| 2210500                | 1:15         | EDT      | 1670               |
| 0040500                | 5/14/2018    |          | 1010               |
| 2210500                | 1:30         | EDT      | 1040               |
| 0040500                | 5/14/2018    |          | 765                |
| 2210500                | 1:45         | EDT      | 765                |
|                        | 5/14/2018    |          |                    |
| 2210500                | 2:00         | EDT      | 648                |
|                        | 5/14/2018    |          |                    |
| 2210500                | 2:15         | EDT      | 580                |
|                        | 5/14/2018    |          |                    |
| 2210500                | 2:30         | EDT      | 543                |
| 0040500                | 5/14/2018    |          | 505                |
| 2210500                | 2:45         | EDT      | 525                |
|                        | 5/14/2018    |          |                    |
| 2210500                | 3:00         | EDT      | 507                |
|                        | 5/14/2018    |          |                    |
| 2210500                | 3:15         | EDT      | 507                |
|                        | 5/14/2018    |          |                    |
| 2210500                | 3:30         | EDT      | 499                |
|                        | 5/14/2018    |          |                    |
| 2210500                | 3:45         | EDT      | 499                |
| 2240500                | 5/14/2018    | FRT      | 400                |
| 2210500                | 4:00         | EDT      | 499                |
| 224.05.00              | 5/14/2018    | -D-T     | 400                |
| 2210500                | 4:15         | EDT      | 499                |
| 224.05.22              | 5/14/2018    |          |                    |
| 2210500                | 4:30         | EDT      | 499                |
| 2240705                | 5/14/2018    |          | 465                |
| 2210500                | 4:45         | EDT      | 499                |
| 224.05.22              | 5/14/2018    |          |                    |
| 2210500                | 5:00         | EDT      | 499                |
| 2240705                | 5/14/2018    |          |                    |
| 2210500                | 5:15         | EDT      | 499                |
| 2210500                | 5/14/2018    | EDT      | 499                |

| USGS<br>Gage<br>Number | Date / Time | Timezone | Discharge<br>(cfs) |
|------------------------|-------------|----------|--------------------|
|                        | 5/15/2018   |          |                    |
| 2210500                | 0:00        | EDT      | 1750               |
| 2210300                | 5/15/2018   |          | 1750               |
| 2210500                | 0:15        | EDT      | 1750               |
| 2210500                | 5/15/2018   |          | 1750               |
| 2210500                | 0:30        | EDT      | 1750               |
| 2210500                | 5/15/2018   |          | 1750               |
| 2210500                | 0:45        | EDT      | 1750               |
| 2210500                | 5/15/2018   |          | 1,30               |
| 2210500                | 1:00        | EDT      | 1670               |
| 2210500                | 5/15/2018   | 201      | 2070               |
| 2210500                | 1:15        | EDT      | 997                |
|                        | 5/15/2018   |          |                    |
| 2210500                | 1:30        | EDT      | 700                |
|                        | 5/15/2018   |          |                    |
| 2210500                | 1:45        | EDT      | 580                |
|                        | 5/15/2018   |          |                    |
| 2210500                | 2:00        | EDT      | 507                |
|                        | 5/15/2018   |          |                    |
| 2210500                | 2:15        | EDT      | 473                |
|                        | 5/15/2018   |          |                    |
| 2210500                | 2:30        | EDT      | 441                |
|                        | 5/15/2018   |          |                    |
| 2210500                | 2:45        | EDT      | 433                |
|                        | 5/15/2018   |          |                    |
| 2210500                | 3:00        | EDT      | 425                |
|                        | 5/15/2018   |          |                    |
| 2210500                | 3:15        | EDT      | 417                |
|                        | 5/15/2018   |          |                    |
| 2210500                | 3:30        | EDT      | 410                |
|                        | 5/15/2018   |          |                    |
| 2210500                | 3:45        | EDT      | 410                |
|                        | 5/15/2018   |          |                    |
| 2210500                | 4:00        | EDT      | 410                |
|                        | 5/15/2018   |          |                    |
| 2210500                | 4:15        | EDT      | 402                |
|                        | 5/15/2018   |          |                    |
| 2210500                | 4:30        | EDT      | 387                |
|                        | 5/15/2018   |          |                    |
| 2210500                | 4:45        | EDT      | 373                |
|                        | 5/15/2018   |          |                    |
| 2210500                | 5:00        | EDT      | 366                |
|                        | 5/15/2018   |          |                    |
| 2210500                | 5:15        | EDT      | 359                |
| 2210500                | 5/15/2018   | EDT      | 352                |

|         | 5:30               |     |     |
|---------|--------------------|-----|-----|
|         | 5/14/2018          |     |     |
| 2210500 | 5:45               | EDT | 499 |
|         | 5/14/2018          |     |     |
| 2210500 | 6:00               | EDT | 499 |
|         | 5/14/2018          |     |     |
| 2210500 | 6:15               | EDT | 499 |
|         | 5/14/2018          |     |     |
| 2210500 | 6:30               | EDT | 490 |
|         | 5/14/2018          |     |     |
| 2210500 | 6:45               | EDT | 490 |
|         | 5/14/2018          |     |     |
| 2210500 | 7:00               | EDT | 490 |
|         | 5/14/2018          |     |     |
| 2210500 | 7:15               | EDT | 490 |
|         | 5/14/2018          |     |     |
| 2210500 | 7:30               | EDT | 490 |
|         | 5/14/2018          |     |     |
| 2210500 | 7:45               | EDT | 490 |
|         | 5/14/2018          |     |     |
| 2210500 | 8:00               | EDT | 490 |
|         | 5/14/2018          |     |     |
| 2210500 | 8:15               | EDT | 490 |
| 2210500 | 5/14/2018          |     | 150 |
| 2210500 | 8:30               | EDT | 490 |
| 2210500 | 5/14/2018          |     |     |
| 2210500 | 8:45               | EDT | 490 |
| 2220500 | 5/14/2018          |     | 150 |
| 2210500 | 9:00               | EDT | 490 |
| 2210300 | 5/14/2018          | 201 | 150 |
| 2210500 | 9:15               | EDT | 490 |
| 2210300 | 5/14/2018          | 201 | 150 |
| 2210500 | 9:30               | EDT | 490 |
| 2210300 | 5/14/2018          | 201 | 150 |
| 2210500 | 9:45               | EDT | 490 |
| 2210300 | 5/14/2018          |     | +50 |
| 2210500 | 10:00              | EDT | 490 |
| 2210300 | 5/14/2018          |     | +50 |
| 2210500 | 10:15              | EDT | 490 |
| 2210300 | 5/14/2018          |     |     |
| 2210500 | 10:30              | EDT | 490 |
| 2210300 | 5/14/2018          |     | 450 |
| 2210500 | 10:45              | EDT | 490 |
| 2210300 | 5/14/2018          |     | 450 |
| 2210500 | 11:00              | EDT | 490 |
| 2210300 | 5/14/2018          |     | 430 |
| 2210500 | 5/14/2018<br>11:15 | EDT | 490 |
| 2210500 |                    | EDT | 490 |
| 2210500 | 5/14/2018          | EDT | 400 |
| 2210500 | 11:30              | EDT | 490 |
| 2240500 | 5/14/2018          | FDT | 400 |
| 2210500 | 11:45              | EDT | 490 |

|         | 5:30               |     |     |
|---------|--------------------|-----|-----|
|         | 5/15/2018          |     |     |
| 2210500 | 5:45               | EDT | 352 |
|         | 5/15/2018          |     |     |
| 2210500 | 6:00               | EDT | 352 |
|         | 5/15/2018          |     |     |
| 2210500 | 6:15               | EDT | 352 |
|         | 5/15/2018          |     |     |
| 2210500 | 6:30               | EDT | 380 |
|         | 5/15/2018          |     |     |
| 2210500 | 6:45               | EDT | 417 |
|         | 5/15/2018          |     |     |
| 2210500 | 7:00               | EDT | 441 |
|         | 5/15/2018          |     |     |
| 2210500 | 7:15               | EDT | 457 |
|         | 5/15/2018          |     |     |
| 2210500 | 7:30               | EDT | 465 |
|         | 5/15/2018          |     |     |
| 2210500 | 7:45               | EDT | 473 |
|         | 5/15/2018          |     |     |
| 2210500 | 8:00               | EDT | 473 |
|         | 5/15/2018          |     |     |
| 2210500 | 8:15               | EDT | 482 |
|         | 5/15/2018          |     |     |
| 2210500 | 8:30               | EDT | 482 |
|         | 5/15/2018          |     |     |
| 2210500 | 8:45               | EDT | 482 |
|         | 5/15/2018          |     |     |
| 2210500 | 9:00               | EDT | 482 |
|         | 5/15/2018          |     |     |
| 2210500 | 9:15               | EDT | 482 |
|         | 5/15/2018          |     |     |
| 2210500 | 9:30               | EDT | 482 |
|         | 5/15/2018          |     |     |
| 2210500 | 9:45               | EDT | 482 |
|         | 5/15/2018          |     |     |
| 2210500 | 10:00              | EDT | 482 |
| 2240500 | 5/15/2018          |     | 462 |
| 2210500 | 10:15              | EDT | 482 |
| 2240500 | 5/15/2018          | FDT | 402 |
| 2210500 | 10:30              | EDT | 482 |
| 2240500 | 5/15/2018          | FDT | 470 |
| 2210500 | 10:45              | EDT | 473 |
| 2210500 | 5/15/2018          | FDT | 470 |
| 2210500 | <u>11:00</u>       | EDT | 473 |
| 2210500 | 5/15/2018<br>11:15 | EDT | 470 |
| 2210500 | 5/15/2018          | EDT | 473 |
| 2210500 | 5/15/2018<br>11:30 | EDT | 465 |
| 2210300 | 5/15/2018          | EUT | 405 |
| 2210500 | 5/15/2018<br>11:45 | EDT | 465 |
| 2210300 | 11.40              |     | 405 |

| 1 1     | 5/14/2018 |     | 1    |
|---------|-----------|-----|------|
| 2210500 | 12:00     | EDT | 490  |
| 2210500 | 5/14/2018 | EDT | 490  |
| 2210500 | 12:15     | FDT | 400  |
| 2210500 |           | EDT | 490  |
| 2210500 | 5/14/2018 | FDT | 400  |
| 2210500 | 12:30     | EDT | 490  |
| 2240500 | 5/14/2018 |     | 100  |
| 2210500 | 12:45     | EDT | 490  |
|         | 5/14/2018 |     |      |
| 2210500 | 13:00     | EDT | 490  |
|         | 5/14/2018 |     |      |
| 2210500 | 13:15     | EDT | 490  |
|         | 5/14/2018 |     |      |
| 2210500 | 13:30     | EDT | 490  |
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### FEDERAL ENERGY REGULATORY COMMISSION Washington, D. C. 20426

OFFICE OF ENERGY PROJECTS

Project No. 2336-095, 096 – Georgia Lloyd Shoals Hydroelectric Project Georgia Power Company

November 6, 2018

Mr. Herbie Johnson Hydropower General Manager Georgia Power Company 600 North 18<sup>th</sup> Street BIN 16N-8180 Birmingham, AL 35203-1359

Subject: Minimum Flow Deviations Pursuant to Article 402

Dear Mr. Johnson:

This letter is in regard to your May 10 and 29, 2018 filings to the Federal Energy Regulatory Commission (Commission) of two separate minimum flow deviations that occurred at your Lloyd Shoals Hydroelectric Project No. 2336. As discussed further below, we have concluded that these incidents will not be considered violations of your project license.

Article 402 of your license<sup>1</sup> requires you to release a continuous minimum flow of 400 cubic feet per second (cfs) from the Lloyd Shoals Dam into the Ocmulgee River, or inflow to the project reservoir, whichever is less. The flow may be temporarily modified if required by operating emergencies beyond your control, and for short periods upon agreement between you and the Georgia Department of Natural Resources (Georgia DNR). If the flow is so modified, you are required to notify the Commission as soon as possible, but not later than 10 days after each such incident. The point of compliance for your project is measured at the U.S. Geologic Survey (USGS) Gage 02210500; Ocmulgee River near Jackson, GA.

<sup>&</sup>lt;sup>1</sup> Order Issuing New License (62 FERC ¶ 62,201), issued March 22, 1993.

Project No. 2336-095, 096

## May 1, 2018 Deviation

In your May 10 filing, you report that at 0323 hours on May 1, 2018, the flow measured at your compliance point dropped below the required 400 cfs due to a plant-wide power outage. You sent your plant operator immediately to investigate the cause and restore service to the project. After coordinating with substation operators, who were also called onsite for the incident, your operator discovered that a snake had entered your 12 kV bus box in the substation, causing relaying to operate in your substation, which consequently caused all of your generating units to trip, causing the shutdown.

You state that minimum flow was restored at 0612 hours (a total duration of approximately two hours and fifteen minutes), and you provide operational data that indicate that the lowest observed flow during this incident was 190 cfs, and that the average discharge on that day was 1,690 cfs. You notified Georgia DNR of the incident, and state that you did not observe, nor were you made aware of, any adverse environmental impacts relating to this event. Additionally, you state that due to the duration of the incident, you would not expect any negative impacts stemming from this deviation.

### <u>May 15, 2018 Deviation</u>

In your May 25, 2018 letter, you report that flow measured at the USGS gage below your project dropped below the required minimum flow of 400 cfs. You state that at 0413 hours on May 15, your operator attempted to increase your wicket gate settings in response to declining flows at your project, but the computer-based operating program used to adjust the wicket gates was unresponsive for approximately 10 minutes. At approximately 0423 hours, the program became responsive, but you report that because of the glitch, the flows, measured at the USGS gage, dipped below the required 400 cfs for approximately 2 hours, from 0430 to 0630 hours when minimum flows were restored.

You report that although the program had become responsive, you scheduled an investigation to determine the cause of the problem and to determine what measures, if any, can be taken to prevent similar future events from occurring. Operational data that you provide in the report indicate that the minimum discharge you recorded was 352 cfs. You notified Georgia DNR of the incident and also state that you did not observe or have not been made aware of any adverse environmental impacts stemming from this event. You also state that due to the duration of the event you do not expect any resulting negative impacts.

# **Discussion and Conclusion**

As stated above, we will not consider the incidents to be violations of your project license. Regarding the May 10 incident, a snake had entered your substation bus box and

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caused a series of unforeseen events that led to your units tripping offline. You immediately sent personnel to the site to investigate, and took proper actions to safely return your plant back into operation. On May 15, the computer-based program you use to adjust your wicket gates became unexpectedly unresponsive during your attempts to stabilize minimum flows, and you persisted in your actions to get the program to respond, which it did within 10 minutes. Additionally, you also took actions to prevent similar future events from occurring. You notified the Georgia DNR and the Commission after both events within the required time frames, and you observed nor received reports of adverse environmental impacts as a result of these incidents.

Thank you for your cooperation. If you have any questions regarding this letter, please contact Brian Bartos via email at brian.bartos@ferc.gov or by telephone at (202) 502-6679.

Sincerely,

Andrea Claros Aquatic Resources Branch Division of Hydropower Administration and Compliance